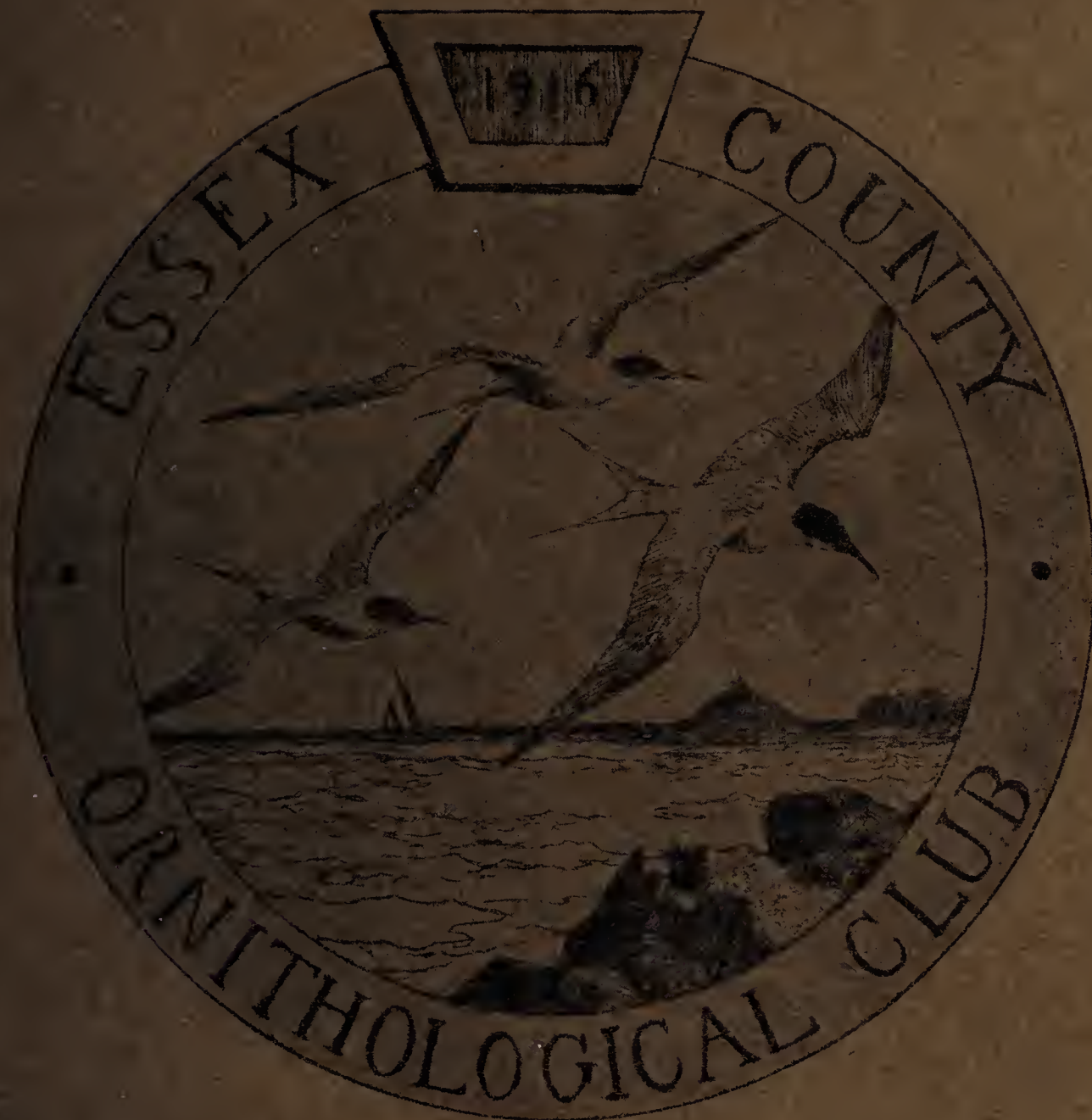


BULLETIN

OF THE



1929

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A WINDOW PRINT

SEE PAGE 74

BULLETIN

OF THE

Essex County Ornithological Club

OF

Massachusetts



1929

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BY THE

ESSEX COUNTY ORNITHOLOGICAL CLUB
OF MASSACHUSETTS, INC.

Salem, Massachusetts

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BULLETIN
OF THE
ESSEX COUNTY ORNITHOLOGICAL CLUB
OF MASSACHUSETTS
SALEM, MASSACHUSETTS

ISSUED ANNUALLY

EDITORIAL COMMITTEE

RALPH LAWSON

ARTHUR P. STUBBS

DR. C. W. TOWNSEND

DECEMBER, 1929

SALEM, MASS.

Number 11

FOREWORD

The year 1929 was most satisfactory but not unusual. The Club was active within the County, and the Newburyport region was for the first time visited consistently by Club members. The Artichoke River Sanctuary yielded much interesting field material, and never before had we fully appreciated its possibilities. Our discoveries in the north will result in a much more careful survey of other parts of the County as yet but little known to our field men. We have been too apt to follow familiar trails, and it is most refreshing to find new lands and shores to explore.

Our Club meetings were interesting, and we are indebted to our members and others who have spoken each evening. Our field reports have covered a wide range of species, and have resulted in a most satisfactory year's list. Several of our members are very active in the field, and confine their searches almost entirely to the favorable areas in the County which can be gotten at quickly and easily. The Club always welcomes an opportunity to show to strangers our more interesting observation points.

The Club is much pleased that the invitation extended by the Peabody Museum of Salem to the American Ornithologists' Union to meet here in October, 1930, was accepted. We feel that there are many advantages here. There is an excellent and

interesting Museum with ample lecture hall and convenient smaller rooms for meetings within three minutes walk of a large, modern hotel. The City of Salem, founded in 1626, is full of historic interest which need not be detailed here.

The birds of our County have been studied from the time of the earliest settlers. Francis Higginson who lived in Salem in, "New England's Plantation," William Wood in "New England's Prospect," and John Josselyn in "An Account of Two Voyages to New England" and in "New England's Rarities," all published in the seventeenth century, regale the reader with curious accounts of our birds. F. W. Putnam in 1868 lists the birds of the County in the Proceedings of the Essex Institute, C. J. Maynard in 1870 gives a list in his "Naturalists Guide" of the birds of Eastern Massachusetts, based largely on his studies at Ipswich, and A. P. Morse in 1912 published a pocket list "with especial reference to Essex County." The Nuttall Ornithological Club published Charles W. Townsend's "Birds of Essex County" in 1905 and his "Supplement" in 1920. Our Club has published a Bulletin for eleven years in which the birds of the County are kept up to date.

Salem is but twelve miles from the Ipswich Sand Dunes, made famous by the discovery there in 1868 by Charles J. Maynard of the Ipswich Sparrow. The region has been described in Dr. Townsend's "Sand Dunes and Salt Marshes" and in his "Beach Grass."

BIRDS OF PARADISE IN THE PHILADELPHIA ZOOLOGICAL GARDEN

C. EMERSON BROWN

Unquestionably the most gorgeously plumaged birds in the world are the brilliantly hued Birds of Paradise. They are becoming very scarce, and the restrictions placed upon them by the government at the shipping points, make importation very difficult. This together with the high cost of the birds themselves, and the fact that they are rather difficult to keep healthy in captivity, make them rare in zoological collections. Even one or two of these splendid birds in a collection is an asset to any zoo, but Philadelphia is most fortunate in having a very fine collection at this time of the following species of Birds of Paradise: Lesser, Six-plumed, Lawes' Six-plumed, Twelve Wire, Wallace's, Wilson's Magnificent, Prince Rudolph's Blue, King, Black Manucode. They have been in the collection now for over a year, and during that time have attracted a great deal of attention.

The feeding is as follows:

7.30 A. M. Each bird is given half a small sweet orange.

9.00 A. M. They are given a quantity of prepared food (made here) which contains zweiback, horse hearts (boiled, ground, roasted and ground a second time until it resembles finely ground coffee) boiled carrots, boiled white potatoes, boiled eggs, all mixed together with cod liver oil, a little white corn meal and a few ant eggs. In order that they may pick up their food easily and not throw it about the cage, it is rolled into small balls and left in the cage for about two hours. If not all cleaned up by that time, the remainder is thrown away.

1.00 P. M. Prepared food and three grapes for each bird, with both skins and seeds removed from grapes. What remains at the end of two hours is thrown away.

4.00 P. M. Their last feeding for the day, consists of one-quarter of a ripe banana and three live meal worms for each bird. This is left in the cage over night.

We find it preferable to feed often so the food will not spoil or sour and endanger the life of the birds. It also keeps them

lively and just hungry enough to be ready to eat at each serving. Running water is supplied in each cage.

The plumes of the Birds of Paradise were doubtless used by savages many years ago for ornamentation, and at one time by people of our own country for feminine millinery. Fortunately, a law has been enacted that prohibits the wearing of these plumes, otherwise the birds would in all probability now be extinct.

Many fabulous tales are told, one of which relates that these beautiful birds spent most of their time floating in the air, turning always toward the sun, excepting when they rarely attached themselves among the highest branches of the loftiest trees, supposedly by their long tail plumes. As the feet were always cut off in trade skins, the birds were thought by Europeans to be footless and hence called *Apoda*. They were supposed to feed on dew or vapor and occasionally on the nectar of flowers. The female was said to lay her single egg upon the back of her consort. Poetry of this sort has been written regarding them:

“None knows their nest, none knows the dame that breeds them,
Foodless they live; for the aire alonely feeds them.
Wingless they fly, and yet their flight extends
Till with their flight their unknown live’s-date ends.”

They have been well named by the Europeans who first beheld them “God’s Birds” and “Birds of the Sun,” for they are all extremely beautiful.

Like the peacock, they all have a way of showing off their beautiful plumes, and if one happens to be there when they are spreading and showing off, he will find it a sight worth seeing. The display given by the Blue Bird of Paradise is the most beautiful of them all. The exhibition lasts some time, during which the male hangs from a branch by his feet, then turning completely upside down he spreads and waves his blue plumes in a quivering manner faster and faster until they fairly bristle and appear to be all the known shades of blue. In the meantime, a large patch of glistening purplish red scintillates in the sunshine across the breast like a fancy-colored piece of velvet until the bird appears to be a riot of vivid hues. The head with its white bill remains hanging downward and moves from side to side as if the bird

were conscious of its beauty and were trying to see that all plumes are correctly placed. The female in the next cage looks on with admiration at all this remarkable display. She sometimes gives an exhibition of her own which consists of a number of complete back somersaults. The Magnificent Bird of Paradise, much smaller in size, also has a beautiful display. Pointing his bright green bill straight in the air, he puffs out his brilliant green breast and raises a buff-colored fan of feathers that completely encircles the entire head, giving him the appearance of an artistic piece of fancy work rather than a live bird. Each species has its own way of showing off and the displays are too elaborate and beautiful to be fully described in this short article. A walk down "Paradise Row" in our Bird House when the sun throws its rays into their cages is a revelation of color and gayety in bird life.

As I have said, these beautiful birds are fast becoming scarce, as the laws governing their exportation from their native land are so stringent and the prices so high. It has been reported, however, that many birds have been smuggled out in various ways. The smuggler sometimes digs out the center of a loaf of bread and placing the bird inside, closes the loaf up again leaving a few air holes so that the bird may breathe. These delicate birds must receive the very best attention and we can only do the best we know and hope that our fine collection will remain with us for many years.



A EUROPEAN BLACK-HEADED GULL IN NORTH AMERICA

S. G. EMILIO

While an account of the taking of *Larus ridibundus* at Newburyport sufficiently long properly to record the occurrence has been sent to *The Auk*, a somewhat more detailed story of all the circumstances attending its capture may be of interest here.

In the first place the gull was seen on Sunday, January 26, 1930. The party consisted of Messrs. F. H. Allen, C. E. Clarke, John Conkey, Ludlow Griscom, G. L. Perry, G. B. Redding and the writer.

The trip to Newburyport was to have been made on January 12, but bad weather intervened, fortunately, and the journey to the northern part of the County was postponed. I met Mr. Allen at the train in Salem and we visited various places in the southern part of the County before joining, at Topsfield, the others, who had been hunting in Winchester and Medford. The day was cold, about 15° above, with a cloudless sky and brisk northwest wind.

Arriving at that part of Newburyport sometimes known as Joppa, we stopped on the harbor shore to look over the water birds. Plenty of Herring Gulls were in evidence and Goldeneyes, Red-breasted Mergansers, Buffle-heads and an occasional Black Duck were to be seen within reasonable range. There were also small groups of restless Bonaparte's Gulls and as some of these came in towards us from out in the harbor and wheeled about before alighting, I detected among them an odd bird, slightly but distinctly larger and which still further called attention to itself presently, by flying about in a very erratic manner. It soon alighted and at once it was clear that the bill was much longer than a Bonaparte's and apparently reddish. Hastily getting out of my car I called the others attention to the bird and Mr. Allen and I unlimbered our telescopes. Through the telescopes it was very evident this gull had a long, deep red bill; in size, the bird was perhaps a fifth or less larger than a Bonaparte's Gull; in coloration, very slightly paler on the mantle but otherwise almost identical, including an auricular spot. When it took to the air again, Griscom particularly noted—and we all

saw the slaty coloration of the under side of the primaries. It was not until later when I saw it on the mud flats that the crimson tarsi and toes were so striking, but we did at least glimpse this deep red coloration as the bird alighted on or left the water.

Here was a poser. Griscom at once declared it was no North American gull, and the rest of us more slowly eliminated Kittiwake, Laughing, Franklin's, Short-billed, Heerman's and Sabine's—birds of about the stranger's size—for more or less obvious reasons, but I, at least, felt we must be forgetting some western form.

Mr. Griscom suggested the bird might be a Little Gull, on account of the dark coloration of the under-wing, but Mr. Allen and Mr. Clarke quickly convinced him it could not be for the very good reason it was much too large. Then Griscom guessed our bird to be a Black-headed Gull of Europe, *Larus ridibundus*, in winter plumage.

All this happened very quickly, and in less time than it takes to read about it I had my collecting gun out and was hurrying along the water-front to get in position for a shot. Whatever its identity I was pretty sure it was new to the County, State and possibly New England. That it proved actually new to North America was something that came afterward. After an interminable wait the bird came within perhaps forty yards and I pulled the trigger. Shot tore into the water literally all around the bird, but it flew away quite unharmed.

It was very apparent I needed a bigger gun and a boat. While I had known Mr. Charles H. Richardson, Jr. for five years, he was in rather poor health the last time I saw him and I thought I had better turn to Warden Edward Babson for aid. So I picked up what proved to be a cold trail of the Warden's and followed it for fifteen miles without avail, while the rest of the party ate lunch.

Temporarily balked in the attempt to capture the gull, I went with the rest to Plum Island, Ipswich, and home.

In the evening Griscom phoned me from Cambridge saying that he could spend all day Monday, if necessary, in pursuit of the gull and it was arranged that he was to meet Babson and me about 9.15 A. M.

Monday morning, Babson of his own volition brought along Mr. Richardson, and he proved of invaluable aid. By 9.45 A. M. we had located the gull close off the yacht club house, and proceeded to get a boat, chop the ice out of it and three of us embarked on the calm waters of the harbor. Griscom stayed ashore and to Mr. Richardson was given the task of operating my old 12 gauge. Mr. Babson rowed and rowed and rowed, but I could not see the bird we sought and Griscom from much higher elevation on land was equally unable to find it. So we landed and waited and waited and waited. Some time after one o'clock a good number of small gulls came over to the fast-appearing flats and presently among them we located our quarry. So once more we went afloat and approached, but the birds all moved along and after quite a row we again came near our gull. It was wary and left the water at long range but Mr. Richardson fired, the bird shook itself a bit and flew away.

We decided then to put up the boat and have some lunch. Returning later we found the flats were exposed for a long distance and just off shore on the water sat our gull. This time Mr. Richardson had his own gun, a beautiful hammerless 10 gauge, and he had equipped Babson with a 12. I gave Griscom my 410 and to even things up a little, my rubber boots also. I took my untrustworthy 12 gauge—untrustworthy because Mr. R. had been unable or unwilling to pull hard enough on one trigger to discharge the second barrel when he shot before lunch. And so we advanced across the flats, Babson deploying far to the left; Richardson, erect, alert, advancing directly toward the bird, aided in keeping track, among the small gulls, of which one we wanted by Griscom and me with our glasses; Griscom himself, somewhat behind and to the right of Richardson, trying hard not to gesticulate too wildly as he endeavored to hold his gun and manipulate his enormous binoculars with one and the same pair of hands; and I, well ahead and far to the right.

Some of the Herring Gulls and all of the attendant Bonaparte's took alarm and flew—a few more steps and our bird became restless. Mr. Richardson fired, the bird rose a couple of feet only to be dropped by the other barrel, but merely winged, and much too far out to be reached by wading. The bird was

dispatched finally by Mr. Richardson with my 410, lest it flop or swim still further away.

Now came the really bad part of it all. The day was waning fast. We had no boat this time, nor was there any immediate possibility of getting one. The mighty Merrimac and the tide were in complete accord and nearby water was rushing seaward very speedily. We trudged along the flats keeping pace with the down stream drift of the bird. Presently Griscom could stand it no longer, and began throwing equipment and apparel to one and another of us with the idea of swimming—if necessary—for that gull. I certainly did not want to swim for it, but it was not exactly necessary yet for *him* to, and calmer counsel prevailed. Soon a gentle northeast zephyr sprang up, the flats levelled off a bit under water and with the bird drifting in appreciably Mr. R. was able by wading to within a few inches of the top of his hip-boots to retrieve the bird.

It happens that the Slender-billed Gull of Europe is much the same in size and practically identical in plumage with *ridibundus* in winter, so that a certain field identification is not possible. In the hand, however, the bird proved by bill measurement to be *ridibundus*. There are two recognized races of this species, the typical or European bird and the Asiatic *sibiricus*. Our gull if a female was too large for the typical race but if a male fell within the limits for the European form. It proved on dissection to be a male and hence *Larus r. ridibundus* Linn. the Black-headed Gull of Europe.

A few words regarding the bird in its normal range may not be amiss.

In distribution this species is largely confined to the temperate zone of the eastern hemisphere. In Europe it breeds abundantly in the British Isles and north to the southern part of the Scandinavian peninsular. It migrates southward, somewhat, in winter.

Mr. Babson who is familiar with it in summer plumage in Scotland tells me that it comes in numbers in March as soon as the frost is gone and follows the plowman, hastening along almost at his heels. For the Black-headed is an inland as well as a coastal gull and, as a species is not pelagic, being seldom seen

far from land. This is rather interesting in view of the recent occurrence at Newburyport, and it perhaps explains why a sea bird as numerous as it is across the water has never before been known to cross to the United States or Canada.

From early spring until August it wears dark feathers on its head as do our Bonaparte's, Laughing and certain other gulls. This hood, however, in spite of the bird's name, and in contrast to the American gulls above mentioned, is not black at all, and while at distance it appears black it is in reality not even a dark, but rather a dull or coffee-brown.

Like most of the gulls the bird is omnivorous and is undoubtedly useful, especially inland where it consumes immense numbers of harmful insects, and perhaps a few beneficial ones too. Along the coasts and rivers it devours garbage, and is a scavenger of value.

This North American specimen is of more than local interest and largely for this reason it has been given to the Boston Society of Natural History in exchange for certain other rare birds taken in Essex County which are duplicated in the Boston Society's collections but which are unrepresented in the nearly three hundred forms of the County's avifauna on exhibit at our Peabody Museum of Salem.



FIELD IDENTIFICATION OF MASSACHUSETTS GULLS

LUDLOW GRISCOM

Several factors combine to make the Gulls a most difficult group in the field. They are wary water and sea birds, do not permit a close approach, and are most often observed at a considerable distance off shore. They are very uniformly colored and closely resemble each other. They have very complicated plumage changes, which are not only similar, but one stage of one species will simulate another stage of a second. Finally, it is exceptional to have any one character hold good for more than one plumage. In addition to this, many of the best specific and generic characters are indeterminable in life. One of the most important is the primary pattern or "wing formula." The most detailed description of a gull's wing will not give the reader the slightest idea of what the color pattern of this wing will be when spread in flight, and it is obvious that many of the technical differences in the five outer primaries cannot possibly be determined in flight.

I have given a good deal of attention to gulls for the past twenty years, and have had exceptional opportunities to study them alive from Labrador to Panama and from the Atlantic to the Pacific. Many of the species I have studied extensively in various parts of Europe. The recent increase of many of them due to protection, and their unprecedented tameness on certain beaches and harbors has given unexcelled opportunity to check the usability of various characters. Finally it was my good fortune to be in daily contact with Dr. Dwight while he was working on his monograph of the Gulls of the World, and I handled with him thousands of specimens, and watched the artist at work on the drawings. I have studied a good many difficult groups of birds in life, but in no group has it been more vitally necessary to go afield armed with exact mental pictures of minute details, gained from constant handling of specimens. I can only say to anyone who wishes to become competent to handle the immature plumages of the rarer species, or the finer points of any species, that no article, no matter how well written, can act as a substitute for the constant examination of specimens. Nor can one

individual hope to include in his own experience the combined knowledge and observations of hundreds of students. Many minor points will probably be found omitted from this paper which will occur to one reader or another. As a matter of policy, however, I have made no effort to include every observable character of every species, confining myself to those which are valuable or essential aids to correct identification.

To begin, we can profitably consider various types of characters and the degree to which they are reliable in the field or furnish diagnostic points for identification.

SIZE

I divide the gulls considered into three general groups, as follows, giving approximate wing length variations in inches.

1. Large. Glaucous ($16\frac{3}{4}$ - $18\frac{3}{4}$), Black-backed ($18\frac{1}{2}$).
2. Medium. *a.* Herring ($16\frac{1}{2}$ -18), Iceland ($14\frac{3}{4}$ - $16\frac{1}{2}$), Kumlien's ($15\frac{3}{4}$).
b. Ring-billed ($13\frac{1}{2}$ - $14\frac{3}{4}$), Ivory ($13\frac{1}{4}$).
3. Small. *a.* Laughing ($12\frac{1}{2}$ -13), Franklin's ($11\frac{1}{2}$ - $12\frac{1}{2}$), Kittiwake ($12\frac{1}{4}$).
b. Black-headed * (11 - $12\frac{1}{2}$), Sabine's (10 - $11\frac{1}{4}$), Bonaparte's (10 - $10\frac{1}{2}$), Little ($8\frac{3}{4}$ -9).

It will be obvious that we are here dealing with a highly relative factor, granting great differences between the extremes. Slightly smaller species appear larger in hazy, foggy or cloudy weather; larger species will appear smaller in very brilliant weather, especially at a distance. Perception of slight size differences is a faculty, the acuteness of which varies widely with the individual, and is capable of improvement by training, so that no individual remains constant. It is consequently quite impossible for any table of size variations to be an absolute guide to all. Summing up my own experience, I offer the following comments:

1. The two "large" species usually, but by no means always, appear slightly larger than the next group, if examined attentively, without direct comparison being necessary. They

* *Larus ridibundus*.

are of slightly heavier build, have deeper, more powerful bills, and under normal conditions of flight have slower and less frequent wing-beats.

2. The Iceland Gull usually does not appear smaller than the Herring Gull.

3. The Ring-billed Gull rarely appears smaller than the Herring, without direct comparison. I should not care to identify a lone gull flying off-shore as this species on size only.

4. The Laughing Gull often seems as large as a Ring-billed Gull.

5. The Kittiwake is particularly variable. It will sometimes appear to be Ring-billed size; under other conditions, especially at great distances, it will approach Bonaparte's Gull size.

6. The Black-headed Gull has the same slender build as the Bonaparte's, and consequently resembles it in size and not the Laughing, in spite of its greater wing length.

7. As a general principle, the rapidity of wing-beat of all gulls increases as their size decreases. On the whole I regard it as slightly less reliable than general size as a diagnostic character.

GENERIC CHARACTERS

The fourteen species here considered are currently classified into five genera, *Pagophila*, *Rissa*, *Larus*, *Hydrocoloeus* and *Xema*, based on a mixture of structural and color characters, some of them by no means trenchant. The five genera have relative field characters as follows:

1. *Pagophila*—color characters only.
2. *Larus*—typical gulls; relatively large and stocky, with relatively short and stout bill; no dark hood in any plumage; winter plumage of adults scarcely distinguishable from breeding plumage; immature plumage very variable, but never with a distinct nuchal collar or an auricular spot, usually with two distinct stages, quite different from adult plumage; relatively wary in habits.

3. Hydrocoloeus—relatively small to very small gulls, with a slender shape, rapid, more fluttering flight, and proportionately longer and slender bills; adults with a dark hood in breeding plumage; winter plumage of adults strikingly distinct from breeding plumage; immature plumage often with only distinct stage, often less variable and less distinct from adult winter plumage, always with an auricular spot; tamer and more unsuspicious in habits.
4. Rissa—approximating Hydrocoloeus in size and Larus in general build and proportions; no hood; immature plumage one stage only, always with a distinct nuchal collar; winter adults distinguishable.
5. Xema—as in Hydrocoloeus, but tail conspicuously forked in adults, *inconspicuously* so in immature.

COLOR OF LEGS AND BILL

A very important character in all gulls, but often difficult or impossible to make out, particularly so in the Kittiwake. In any case, however, where a rare or exceptional record is involved, it is highly desirable and often absolutely essential to determine the color of the soft parts. The color of the legs is sometimes visible when gulls are standing on the ground, but is usually visible only as they rise from the water or are about to alight. In most cases the colors in immature birds are quite different from adults. Statements in most of the popular manuals are often incomplete or inaccurate. The table below speaks for itself.

SPECIES	BILL	FEET
Ivory Gull, adult	Yellow	Black
Ivory Gull, immature	Black	Black
Kittiwake	Yellow	Black
Glaucous, adult	{ Yellow with a subterminal spot of red }	Flesh
Iceland “		Flesh
Kumlien’s “		Flesh to orange-red
Black-backed “		Flesh
Herring, 1st year		Flesh

Glaucous, immature	Dusky to yellowish	Flesh
Iceland “	“ “	Flesh
Kumlien's “	“ “	Flesh
Black-backed “	“ “	Flesh
Herring, 1st yr. “	“ “	Flesh
Herring Gull (2nd and 3rd year)	Yellowish with a dark ring	Flesh
Ring-billed Gull, adult	Yellow with a dark ring	Greenish to yellow
Ring-billed, immature	Dusky to yellowish with dark tip	Greenish yellow
Laughing Gull, adult	Dark red	Dark red
Franklin's Gull, “	Dark red	Dark red
Black-headed Gull “	Crimson	Crimson
Bonaparte's Gull “	Blackish	Orange-red
Little Gull “	Dark red	Vermilion
Sabine's “	Black basally, orange terminally	Dusky
Laughing Gull, imma.	Dusky	Dusky to olive
Franklin's “	Dusky	Dusky
Black-headed “	Dull orange to flesh	Yellowish flesh
Bonaparte's Gull “	Dusky	Dusky to reddish
Little Gull “	Dusky	Yellow to flesh
Sabine's “	Dusky	Dusky

MOUTH LINING

Gulls tend to be voluble or garrulous, and are constantly screaming as they sit together on some bar or beach, or as they squabble for food over the water. Many of their discordant notes and cries are apparently made with the bill opened unusually wide, and surprising as it may seem, the color of the mouth is often visible, and furnishes an aid in identification. Little is on record as regards this character, and the amount of variation remains to be determined. The table below is again self-explanatory.

Ivory: Light yellow.

Kittiwake: Orange.

Glaucous: Flesh color, duller and darker in immature.

Iceland: Flesh color, duller and darker in immature.
 Kumlien's: Flesh color, duller and darker in immature.
 Black-backed: Vermilion, duller and darker in immature.
 Herring: Vermilion, duller and darker in immature.
 Ring-billed: Orange-red.
 Laughing: Deep carmine.
 Franklin's: Deep carmine.
 Bonaparte's: Deep carmine.
 Little Gull: Deep carmine.
 Black-headed: Deep carmine.
 Sabine's: Orange to Vermilion.

COLOR OF MANTLE

An important specific character in gulls, applying chiefly to the adult plumage, when neck, entire underparts, tail, and often the head are pure white. The mantle is *not* different from the rest of the body plumage in the following cases:

Ivory Gull adult—entirely pure white.

Ivory Gull immature—pure white, with a few black spots, chiefly on wings, and a tail band.

Glaucous Gull	}	1st year—pale creamy brown throughout passing gradually to
Iceland Gull		
Kumlien's Gull		

Same three species—2nd year—entirely pure white.

Herring Gull—1st year—dirty greyish brown throughout.

Laughing Gull	}	immature—dark slaty-brown throughout, with whitish rump.
Franklin's Gull		

Black-backed—immature	}	whitish, heavily spotted, streaked or blotched with dusky, adult, colors appearing in later stages.
Herring Gull—2d-3rd yr.		
Ring-billed—immature		

Sabine's Gull—immature—entire upper parts brownish slate, under parts white.

The following table summarizes this character for the adult plumage of the remaining species. Except as noted above, the mantle of the immature of the smaller species is grey, but the shade is scarcely diagnostic.

Glaucous	1. Very pale grey.
Iceland	“ “ “
Kumlien's	“ “ “
Black-headed	“ “ “
Herring	2a. Medium or “gull” grey.
Ring-billed	“ “ “
Bonaparte's	“ “ “
Little	“ “ “
Kittiwake	2b. Light slate grey.
Sabine's	“ “ “
Laughing	
Franklin's	3. Dark slate grey.
Black-backed	4. Black.

The differences between these groups are very obvious, except for 2a and 2b. This difference in shade is exceedingly slight, and would ordinarily be noticeable only under exceptionally favorable circumstances to persons thoroughly familiar with specimens.

WING BAND

The wing band in Gulls must not be confused with the wing-bars of Warblers, or the wing stripes and mirrors of Ducks. It is best developed in adults, and when present, is due to the grey secondaries and tertials being tipped with white. When the wing is *closed*, the grey of the front half of the wing is separated from the (usually) darker primaries by a white bar or band, which runs vertically or diagonally *towards the front*. When the wing is *spread*, the basal half of the inner or posterior edge of the wing is bordered with white. The following points are worth noting.

1. It is naturally wanting in pure white Gulls and various immature plumages.
2. It is *lacking* in the Black-headed and Bonaparte's Gulls.
3. It is relatively inconspicuous in flight in the species with grey mantles.
4. It is barely perceptible in the closed wing of the three “white-winged” Gulls.

5. It is readily discernible in the closed wing of all adult Gulls with black primaries.
6. It is very conspicuous in the three Gulls with dark mantles, with the wing closed or spread.
7. It is relatively narrow in all but Sabine's Gull.
8. In Sabine's Gull, the band on the closed wing is *three or four times as wide* as other species, and when spread, nearly a third of the wing is white.

PLUMAGE CHANGES

These are particularly complicated in gulls, and their relative similarity adds to the difficulty. The larger species of the genus *Larus* take four years to acquire the fully adult plumage and have three distinct stages. The Ring-billed Gull and all the others require three years and have two stages only. It cannot be too strongly emphasized, however, that every possible type of intermediate occurs commonly. The moults are irregular and protracted, and "backward" individuals are common. As a general rule the adult colors of the primaries and soft parts appear last. As regards the body, the head is usually last. Many a Herring Gull, apparently adult will prove upon very close inspection to have second year primaries, or will have a few dusky flecks left on the head and neck and a bill with a dark ring around it. There are one or two other interesting generalizations. Non-breeding birds, lingering well south of their breeding range, are rarely fully adult. The great majority of individuals of any species at the southernmost limit of its winter range tend to be immature, and at the extreme northern limit adult. The apparent deduction that adult birds are hardier and stronger is certainly reasonable, and is sustained by the fact that individuals following steamers to a distance exceeding two hundred miles from land have always been adult in my experience on over fifty voyages.

The plumage changes from immaturity to adult have already been given for many species, and all the larger ones. Winter adults of the genus *Larus* scarcely differ from the breeding plumage. As a rule, a few flecks of dusky will mar the pure white of the head and neck, as in the Herring Gull. A third year Herring

Gull will be quite similar, but the primaries will be mostly black, or the bill will not be pure yellow with a red spot, or both. There is no use in further detail here, as no servicable points for the identification of the species in life are involved. I merely wish to record that under specially favorable circumstances it is entirely possible to discriminate between these plumages in living birds, granted a thorough knowledge of what to look for.

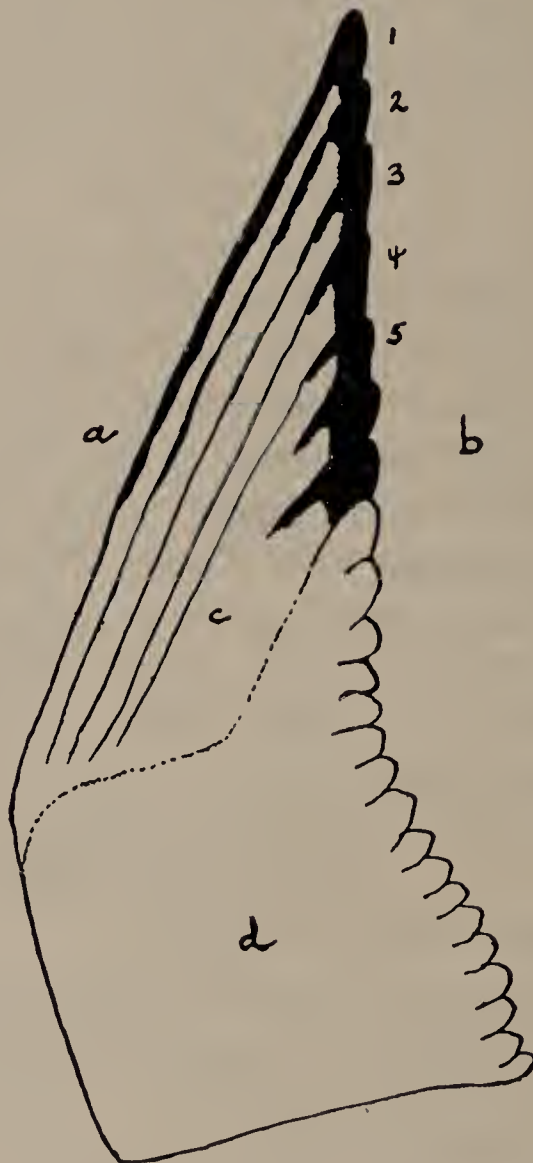
In the genus *Hydrocoloeus*, however, the adult winter plumage is readily distinguishable from the breeding plumage, as the hood is lacking. The head and neck are white, with at most a few dusky marks on the occiput and nape, and there is always a spot of dusky in front of the eye, and an auricular spot. The immature of the Laughing, Franklin's and Sabine's Gull have already been described. In the Black-headed, Bonaparte's and Little Gulls, the immature plumage is relatively similar to that of the winter adult, but the scapulars and wing-coverts are heavily tipped with brownish or dusky, often the mantle and the secondaries may be tipped with black. Winter adults of *Rissa* have an auricular spot (usually gone by February.) The immature has a nuchal collar, a much larger auricular patch, and a large blackish patch on the fore-wing. The tail characters can best be arranged in tabular form.

1. Tail pure white—all species adult; Glaucous, Iceland, and Kumlien's Gull 2nd year.
2. Tail banded, almost terminally.
 1. Band very narrow—Ivory Gull (immature).
 2. Band medium—*Rissa*, *Xema*, and *Hydrocoloeus*.
 3. Band broad—Ring-billed, Black-backed, Herring (2nd and 3rd years).
3. Tail uniform, more or less marbled basally.
 4. Pale buffy brownish—Glaucous, Iceland (1st year).
 5. Dark blackish brown—Herring Gull (1st year,) Laughing and Franklin's (immature, early stage)
 6. As in 4 with a distinctly darker terminal band—Kumlien's.

PRIMARIES AND WING PATTERNS

This subject has been left to the last, as it is by all means the most difficult, but nevertheless contains some of the most

important and valuable field characters, when understood and mastered. The first thing is to learn how to translate a formal description of the primaries into a mental concept of what the wing will look like (a) when closed; (b) when spread in flight.



RIGHT WING OF BONAPARTE'S GULL IN FLIGHT FROM ABOVE
(Diagrammatic)

(a) Outer or front edge of wing. (b) Inner or posterior edge of wing. (c) Pure white area above line. (d) Grey area below line, basal half of wing. The primaries are numbered consecutively, beginning with the outermost.

The above is a diagrammatic drawing of a Bonaparte's Gull wing spread in flight. To draw proper conclusions the reader should first peruse a formal description in some standard manual, and

then examine the figure. The conclusions are as follows, the word "wing" being understood :

1. The mantle includes the fore part (closed) or the basal half above the bend (spread) and the color of this part of the wing will be the color of the mantle.
2. When spread, the color of the basal half of the posterior or inner border will be the color of the tips of the secondaries and tertials. (See section on wing-bands.)
3. The color of the outer half of the outer or front edge will be the color of the outer web of the outermost or first primary.
4. If the primaries are tipped with black, the color of the outer half of the posterior border will be black, its width dependent upon the extent of the tipping.
5. The color of the "interior" of the wing-tip will be the color of the basal half to two-thirds of the primaries.

These conclusions having been directly drawn from the text-figure, we may now draw upon our knowledge of the primary pattern of some other species and make some further deductions. In the Laughing Gull, for instance, the first five primaries are black for most of their length, with narrow white tips, the black terminal area² decreasing from the first to the fifth. The wing-tip will consequently be black, with far more of the outer edge black than the inner. The white tips will appear as a row of "thumbnail" spots along the inner or posterior edge.

With the Herring and Ring-billed Gulls, we encounter "wing-formulas" of maximum complexity. There is an extremely irregular and broken outline of the black area basally. The white "mirrors" appear as *two large spots*. The Ring-billed Gull having a white "mirror" on the outer primary only (usually,) has only *one* large white spot. Both may be profitably contrasted with the Kittiwake, which has no mirrors. The wing-tip is black for *less than half* the distance in the other two species, and the basal outline is a *straight line*, the black area forming an *almost perfect triangle*.

The closed wing is much simpler. When the wing is tightly folded, the coverts (usually the color of the mantle) conceal the

basal two thirds of the primaries. The primaries overlap evenly, and the first or outermost, being the longest, is at the bottom so to speak, only its extreme tip projecting beyond the tip of the second. In other words, the color of the wing-tip beyond the coverts is the sum of the colors of the extreme tips of the primaries in a consecutive series from the innermost to the outermost. In the Herring Gull, for instance, the white "mirrors" are invisible, and the wing-tip is black with an even row of white "thumb-nail" spots. While the "wing-formula" of the Laughing Gull is totally different, the wing-tip of the closed wing is *exactly the same*. Referring once more to the text-figure of the Bonaparte's Gull, and imagining the wing shut up like a fan, the wing-tip becomes *solid black*, with scarcely any white areas visible between the black tip and the grey fore-wing. The wing-tip of the Kittiwake is practically the same, but has *one white spot*; and there is a white wing-band. The foregoing discussion should enable the following summary of wing-tip characters to be understood.

Ivory—Adult, white; immature white with blackish spots, obvious at great distances.

Glaucous } Adult and 2nd year, white; 1st year, pale grey-
Iceland } ish or buffy brownish. Obvious at great distances.

Kumlien's—Adult and 2nd year, white with grey subterminal bars. Obvious at moderate distances in spread wing. The grey barely perceptible in closed wing. First year like Iceland Gull.

Black - backed, Herring, Ring - billed — Immature, blackish brown; 2nd-3rd years, black with white spots at later stages; adults extensively black with more white spots and mirrors, the basal border highly irregular and jagged. The white spots are visible at very great distances.

Kittiwake—Adult, black, the basal outline a straight line, the black area occupying only the terminal $\frac{1}{6}$ of the wing. This character, when once learned, enables the Kittiwake to be identified *at the limit of vision*. The immature is similar, but the black area is more extensive.

Laughing—Adult, black with narrow white spots; immature, blackish.

Franklin's—Adults, outer edge with black border and white tip; balance of wing-tip *white* with irregular group of *short black bars along posterior border*. Immature like Laughing.

Bonaparte's—Adult, white with outer webs and tips of primaries black; immature with far more black, less white.

Black-headed—Very similar to Bonaparte's, but slightly more dusky, less white in "interior." No trenchant field characters.

Little—Adult, grey with broad white tips to primaries, giving a broad white inner border. Immature, very close to Bonaparte's.

Sabine's—Adult, outer two-thirds black, inner third white, affording a unique and striking wing-pattern. Immature, about as in other small species.

The foregoing discussion of the wing-patterns of gulls has been entirely confined to the *upper surface*. When looking at flying gulls, it is apparent that the under surface of the wing is seen just as often as the upper. It is a curious fact that no manual in existence describes the under surface of the wings of our gulls, and important field characters have consequently been completely overlooked and unrecorded, and I have never personally met a student who was aware of them. As a matter of fact, the degree to which the color of the under surface corresponds with the upper, is highly variable and irregular, and cannot possibly be correctly deduced. Please note that the following summary *omits* all species and plumages where the under surface is the same as the upper.

Kittiwake—Adult, black areas *exactly the same* on under surface and *jet black*; immature, under surface of wing *white*.

Herring Gull—Adult, black areas appearing *dusky* on under surface.

Ring-billed Gull—Adult, black areas *jet black* on under surface, as in Kittiwake.

Bonaparte's Gull—Entire under surface of primaries *white*
Sabine's— in all plumages.

Black-headed Gull—All plumages, basal half of wing grey;
outer half of terminal portion jet black, sharply
contrasted with white on inner portion of ter-
minal third. This character separates this
species at great distances from the last.

Little Gull—Adult, under surface of wing *slaty black*; im-
mature, *white*.

Laughing Gull—Adult, dark grey, the terminal half black.

Franklin's Gull—Adult, medium grey, terminal fifth black.



BREEDING OF THE YELLOW-CROWNED NIGHT HERON
(*NYCTANASSA VIOLACEA*) AT IPSWICH

CHARLES W. TOWNSEND

The Yellow-crowned Night Heron is a bird of warm temperate and tropical America, breeding in the southeastern United States, Central America and the northern half of South America. On the Atlantic coast, except for 1927 when two pairs bred in New Jersey, (AUK, XLIV, 1927, p. 560) there is no previous record of its breeding north of South Carolina, but, like other Herons, it often wanders north of its breeding range. In the interior it breeds as far north as southern Indiana, and recently, (AUK, XLV, 1928, p. 370) it was found nesting in central Ohio. Mr. E. H. Forbush, (Birds of Massachusetts, I, p. 343) has collected no less than twenty-three records of the occurrence of this bird in New England, twelve of these for Massachusetts. Of twenty-two where the season is given, eight were recorded for April and two for May, while twelve were recorded from July to October. It is interesting to note that nearly as many are recorded for the spring as for the summer after the breeding season when Herons are more apt to wander north of their range.

On April 11, 1928, in walking through a maple swamp in the Ipswich sand dunes, I started several Black-crowned Night Herons, familiar birds in this region, and another Heron which at once attracted my attention by its more slender form and unusual coloration. It circled about and gave me a good opportunity to see the thick bill and distinctive face markings of a Yellow-crowned Night Heron. On May 6, a second bird of this species was discovered and on May 18, I found the nest. It was twenty-five feet from the ground in the slender branches of a spreading red maple and was made of sticks so loosely interwoven that I was able to see, on May 25, a pale blue egg through one of the holes and through another, two eggs in close contact. The young were hatched on June 11, giving eighteen days as the minimum for incubation. I continued to watch the nest from a blind for several hours every two or three days and always found one bird in charge brooding the young either sitting, standing with tarsi flat, or standing erect, while the young moved about under the

breast feathers and occasionally stuck out their heads. The brooding bird was relieved by its mate at intervals of at least two hours.

Before and after the eggs were hatched, the exchange at the nest was made silently and without ceremony of any sort. Occasionally the bird relieved would walk a foot or two away on a branch, and spend twenty or thirty minutes preening its feathers, before departing on a hunt for food. The young were fed in the usual manner by regurgitation. At no time did I hear any note from the parents even when they were frightened from the nest and departed in haste.

The behavior of these birds was very different from that described by Margaret Morse Nice, who watched a nesting pair of Yellow-crowned Night Herons near Norman, Oklahoma, (*Auk*, XLVI, 1929, pp. 170-176,) where at each interchange at the nest, both birds displayed by erecting their crests and the plumes on their wings. On these occasions the male often pointed his bill straight up, bowed low and emitted a loud "whoop," repeating this act several times. Mrs. Nice also describes four other notes made by the birds at the nest.

Two days after I had discovered the first Yellow-crown, I took Mr. S. Gilbert Emilio to the grove for a sight of this rare bird, and from that time until the birds had flown, numerous other members of the Essex County Ornithological Club, as well as other visiting ornithologists saw the birds. I am indebted to Dr. John B. May for attempts to photograph the birds at the nest, but, owing to the dense foliage and poor light, these attempts were necessarily failures.

On July 6, when the young, four in number, were twenty-five days old, I banded three of them with the invaluable help of Mr. Emilio who climbed the tree, and I collected the fourth young for the Boston Society of Natural History. Later, I collected the nest for that Society.

I was away after this for nearly a month, but on July 15, Mr. Emilio visited the grove and found the three young still there, two of them standing erect on the nest. He writes: "After a few minutes I stepped away from the vicinity of the nest but keeping it in plain sight, and almost at once one of the

faithful parents flew in and alighted within ten feet of the young, uttering a low 'quawz,' the first note I had heard from the adults.' The young were then thirty-four days old.

On my return, I visited the swamp on August 2, and, in the cloud of roosting Black-crowned Night Herons that flew away, I recognized one immature Yellow-crown by its more slender form, its darker plumage and thicker bill. The nest had fallen from the tree but was intact on the ground, as the sticks of which it was made were so well interwoven. It was nearly flat with outside measurements of 30 x 20 inches, and inside, of 7 x 7 inches. The faithful care of the eggs and young by the parents insured the hatching of the eggs and full development of the young, notwithstanding a nearly continuous cold rain storm of ten days duration during the early days of incubation, and notwithstanding the presence of numerous crows eager to help themselves at any omission of the watchfulness.

The grove in which the birds nested is in the Ipswich sand dunes, close to the sea on one side and the salt marshes on the other. It is about six acres in extent, in wet, boggy ground, and composed largely of red maples, several of considerable size. There are a few American elms, aspens and gray birches, with a dense undergrowth and outskirts of alders, shad-bushes, high bush blueberries, wild rose and bayberries, the ground clothed in places with royal, spinulose and sensitive ferns. A pair of Green Herons and two of Black-crowned Night Herons nested in the grove, but the great heronry of the latter is in another grove. The other summer residents were Flickers, Kingbirds, Crows, Red-winged Blackbirds, Baltimore Orioles, Song Sparrows, Red-eyed Vireos, Yellow Warblers, Maryland Yellow-throats, Redstarts, Catbirds, Chickadees, Veeries and Robins.

According to the weather reports, a considerable storm developed in the South in the latter part of March and early in April. This would probably account for the arrival in New England at about the same time of the Yellow-crowned Night Herons as well as of several other southern birds such as a Little Blue Heron, Glossy Ibis and Turkey Vulture. It seems probable that the Yellow-crowns were driven north and arrived together, although, owing to the similarity in plumage of the two sexes,

I did not realize that this was the case until I happened to see both at once. It is hardly probable that the two birds would have reached the same spot some eight hundred miles from the usual northern limit of their breeding range if they had come independently. It is also probable that they were already mated, and finding conditions of marsh and swamp suitable with plenty of food, they proceeded at once to nest. They were very successful in the raising of the young notwithstanding an unusually cold and backward season with prolonged periods of rain and easterly storm. It is conceivable that tropical storms, sweeping northward, have in the past been one of the means by which tropical families like the *Mniotiltidae* and *Tanagridae* have extended their range.

Mr. Bent in his *Life Histories* says: "I have no specimens of the downy young of the Yellow-crowned Heron, nor any partially fledged young; and I cannot find any description of them in print." I shall therefore describe the partially fledged young here. Female, 25 days old; crown black with a narrow median line of brown on each feather, from the ends of each of which project white hair-like filaments of natal down. Feathers of black, scapulars and wing coverts nearly black with fan-shaped centers and tips varying in color from buffy brown and fawn color to nearly white, the white being on the ends of the wing coverts. Below, throat and sides of neck nearly bare; feathers of breast black with white and buffy centers; feathers of flanks and abdomen nearly white with black edgings tinged in places with buff. Tail feathers black with white and buff tips; primaries and secondaries black with small white tips. Iris yellow; lower mandible light yellow, upper, dark but yellow on the edges. Bare skin about the bill and ring about the eye, yellow, slightly darker than lower mandible; feet and tarsi pale yellow with a greenish tinge posteriorly.

It is interesting to reflect that fifteen or twenty years ago the first Yellow-crowned Night Heron seen here by an ornithologist would have been at once collected, and the chance of observing the nesting of this bird far to the north of its usual breeding range would have been lost. Moreover, the observation would have been brief and limited to the collector.

THE SHOOTING SEASON OF 1929 IN ESSEX COUNTY

JOHN C. PHILLIPS

There is nothing very noteworthy to report about the wild-fowl taken at Wenham Lake. It was a poor season in many ways, and after the good early flight on September 21st there were few ducks seen. It is probable that the increase in permanent duck stands on the salt meadows have reduced the opportunities for shooting in the ponds. The great increase in the number of aeroplanes, and the presence of a flying field just west of Wenham Lake have both been detrimental. The Lake also was extremely low in 1929. It fell to about the same level that it reached in 1911 and was only a little higher than the absolute low record of some 30 years ago.

Extremely few western-bred ducks put in an appearance. We shot only 1 Mallard, 2 Pintails, 1 Red-head, 1 Ring-neck and no Canvas-backs. We did, however, get 10 American Widgeon. Lesser Scaup were again rare, only 3 being shot, as against 12 of the Greater Scaup.

There was a satisfactory hatch of local Wood Ducks, particularly in the upper Parker River, where there were probably from 100 to 200 at least. The writer would like to see the opening of the duck season moved forward to October first.

The most remarkable sight of the season at Wenham was a flock of about 100 Snow Geese (Greater)? which came over from the westward low down on November 21st and circled the lake several times. This was about ten o'clock in the morning. There was a thick wet snow at the time but little wind. The flock finally went off in a northerly direction without alighting. They of course paid no attention to the Canada goose decoys. It would be interesting to know for certain whether these were of the Greater or Lesser species.

At Chebacco Lake, during a northeast storm on November 18th, an enormous flock of Brant, reported as nearly 100, flew around the lake during the afternoon. The flock did not alight but 15 of them were shot, this being undoubtedly the largest bag of Brant ever taken in an Essex County pond, so far as we have any records.

Not many Canada geese were seen at Wenham Lake and only 19 were shot. It seems evident that the geese are following the coast more than they used to and are not cutting across the base of Cape Cod so much as following around it. This has resulted in more shooting on the outer Cape and on the islands and rather less at inland points.

Large flocks of Greater Yellow-legs spent the autumn around Wenham Lake, the low water being favorable to them. Some were present up into the first week of November, mixed with the usual complement of Killdeer Plover and sandpipers. The Snow Buntings arrived on November 14th.

Very few snipe were seen in the inland marshes of Essex County, due no doubt to the extreme draught of the summer of 1929. There was almost no ground where they could stop and feed. There were, however, large numbers of Snipe on the salt marshes in the third week of October. The writer was unable to get out at that time to see them. It is doubtful whether many were shot as Snipe on salt meadows, are nearly always extremely wild and restless and well able to look after themselves.

The season was closed to shooting on Ruffed grouse in Massachusetts and these birds have undoubtedly made a gain over the year 1928. Broods were large and many of them prospered, at least up into the middle of September. Around the Bald-Hill region in Boxford, both on and near the reservation there were many fine broods. One which we started on September 1st contained 11 birds. Others contained from 7 to 9 birds. Flocks like these have been rare or absent during the recent lean years. Grouse, however, although very abundant in many places in Essex County are not yet distributed evenly in the smaller, outlying covers.

Grouse staged a remarkable increase in southeastern New Hampshire where they reached a very low ebb in 1927 and 1928. This in spite of continuous long open shooting seasons. In order to give an idea of the present status of these birds in Rockingham County I might say that in 21 days hunting (two of these only outside this county) I started 423 birds, or an average of 20 per day. This of course included many days in October when we were chiefly after Woodcock. The biggest day was on October 26th

when we moved 50 birds, but on several other days we moved from 29 to 39 birds.

It becomes more evident each year that open and closed seasons should be carefully adjusted to the cycles of abundance of the grouse, and authority to open and close the shooting seasons should be left to the discretions of the Director of Fisheries and Game, backed up by the consent of the Governor and council. The legislature cannot decide during its winter session just what the conditions will be during the next spring and summer, and I believe our law makers will be doing a real service to all sportsmen and bird lovers if they will delegate their authority in the matter of this one species at least.

The writer did not hunt wood-cock in Essex County. The birds were reported as rather numerous, but on account of the great drought were not distributed in the usual manner. On the whole the season in New England, according to returns from the questionnaires sent out by the Massachusetts Fish and Game Association, was satisfactory.

It is becoming more apparent to many of us, sportsmen, nature lovers (and I do not like to separate these two classes too sharply) as well as to farmers and rural dwellers that we must begin soon to select our applicants for shooting licenses. It is not fair to the sportsmen who want to play the game decently, and it is not fair to land owners for the State to continue to license all applicants, regardless of their qualifications. There is no doubt that some of the persons now licensed to carry dangerous weapons in our woods and fields have criminal records. Many others have no knowledge of the game laws and what is worse no knowledge of the commonest species of game and non-game birds. Still others are not temperamentally fitted to be turned loose with a dangerous weapon. The sooner we begin to talk about this matter the better. We, in Essex County, surrounded as we are by large cities, containing great numbers of foreign mill workers, are perhaps worse off than many other sections of the State, because we have an enormous number of city hunters living close to us.

I believe that rural dwellers are entitled to some protection from the crowds of irresponsible shooters. Posting of property

no longer protects against trespass and there are many people living in the country that cannot afford to spend their time protecting their property against lawless or ignorant persons. If the state issues shooting licenses to large numbers of persons about whom it knows little or nothing, is it not at least morally responsible for the actions of these persons?



IS IT "THUMBS DOWN" ON HAWKS AND OWLS?

JOHN B. MAY

Director, Division of Ornithology
Massachusetts Department of Agriculture

We slaughtered the Great Auk for its flesh and its feathers, we destroyed the Passenger Pigeon to feed ourselves and our hogs and to provide "sport" for trap-shooters, we nearly exterminated the harmless Least Tern to decorate our womenkind, we have wiped out the Bob-white in perhaps half our Commonwealth,—what shall we do with our hawks and owls?

Hawks and owls, while structurally widely separated, have been grouped together so long as "birds of prey" that we continue to so group them in this article. They are pre-eminently meat-eaters, destroyers of birds, mammals and other animals, that they themselves may live. Because some of them undeniably kill and eat poultry, game or beneficial birds, from time immemorial undiscerning man has condemned them all to death on sight; and, in spite of the studies of conscientious scientists, the prejudice still persists in quarters where a more intelligent view might reasonably be expected. As a result of this continued persecution, many of our hawks and owls are diminishing very markedly in numbers and in my opinion are today the species of wild birds most in danger of extirpation in New England.

It is, of course, difficult to collect accurate statistics on the rate of mortality of any wild creature. The "recoveries" of banded birds give us an inkling of what to expect, however. The Biological Survey recently published figures showing that a grand total of about 400,000 birds had been banded with about 19,000 recoveries, or an average of about 4.75% of all species banded. These recoveries included both living and dead birds. In the case of that group of migratory game known as "wild-fowl", our ducks of various species, the Survey reports about 12% of banded birds as killed and "recovered" through the medium of the army of gunners. Contrast this with the only figures available on hawks and owls.

Dr. Einar Lönnberg of Sweden told the second conference of the International Committee for Bird Protection that banded

hawks showed a mortality as high as 44% in some species with an average of 22.3% in eleven species. Mr. A. A. Cross of Huntington, Massachusetts, reports an average of 24.4% among seven species of hawks, including 50% of Sparrow Hawks and 44.4% of Duck Hawks. Mr. J. A. Gillespie of Glenolden, Pennsylvania, reports an average of 35.7% among four species of hawks and owls. Mr. Ben East reports 22.2% among Bald Eagles in Michigan. While these figures are from too few birds to be taken literally, they certainly are suggestive as to the high mortality among birds of prey and must be considered.

The natural enemies of hawks and owls, aside from man, are few and so the number of eggs laid each year is small. Whenever man throws his weight against the balance of nature, serious results may be anticipated. Until we know more about the interrelations of our wild creatures, we should be very careful before we allow any species to disappear entirely.

The examination of stomach contents and of "pellets" gives us a scientific basis for a report on the food of our raptorial birds, in spite of certain recent attempts to discredit this method of obtaining data. On rare occasions and under special conditions, undigestible portions of the food may not be swallowed but in almost every instance enough of such material is ingested to furnish a clue to the nature of the meal. Even a small fragment of bone may indicate by its structure whether it belonged to a bird or a mammal, for bird bones are in most instances harder and denser than those of mammals.

The investigations of Dr. A. K. Fisher were based largely upon stomach and pellet examinations. In the case of the Marsh Hawk a bird whose economic status has aroused much discussion, his summary of 134 *stomachs* is—7, poultry and game birds; 34, other birds; 57, mice; 22, other mammals; 7, reptiles; 2, frogs; 14, insects; 1, indeterminate; 8, empty; or 41 birds against 79 mammals. Mr. Herbert L. Stoddard, in addition to his careful field studies, collected 1098 Marsh Hawk *pellets*; among these were remains of four Bob-whites; 138 pellets contained bird remains; traces of 14 snakes were found; and 925 pellets contained remains of one or more cotton rats, enemies of the Bob-white and other birds. Major Allan Brooks, on the other hand,

denies that pellets are an indication of the food of this bird, claiming that birds are plucked before eating and that only mammal remains are found in pellets. While it is probable that a Marsh Hawk, when, as occasionally happens, it feeds upon a bird the size of a duck, plucks the larger feathers and eats mostly clear flesh, it almost invariably swallows enough down, small feathers or bones to identify its prey. And in the case of smaller birds we *know* that the Marsh Hawk swallows feathers and bones, for we have the evidence of many stomachs and pellets to prove the fact.

It is probable that the Marsh Hawk should be classified as generally beneficial, from its destruction of great numbers of injurious rodents, but it should be recognized that under certain conditions the species or certain individuals may be decidedly injurious from the bird lover's or game keeper's point of view. For example, on Marthas Vineyard the Marsh Hawk was found to be feeding very largely upon small birds. An examination of 21 stomachs from Massachusetts (most if not all from Marthas Vineyard) showed this unusual condition: 19 contained remains of birds and only 13 remains of rodents.

This is, of course an absolute contradiction of Major Brooks' statement that this bird does not swallow feathers and so its pellets are not an indication of its food. There is an excellent reason for this preponderance of bird over mammal remains in the character of the vegetation on much of the centre of Marthas Vineyard, where low shrub oak, bayberry, blueberry and other dense growths form a covert which is impenetrable for a bird of the size of a Marsh Hawk, and where meadow mice find safety from feathered hunters. Here the Marsh Hawk captures an abundance of small birds flushed from the bushes, but finds mice attainable only in the comparatively small areas of marsh and meadow scattered through the scrub lands. It is an unusual condition, resulting in abnormal feeding habits, and should not be used as a criterion in judging the economic status of the Marsh Hawk as a species.

I recently received for examination a box of pellets of the Long-eared Owl. One pellet contained the sternum and a few feathers of a small bird. In addition I found the skulls of two

shrews, and of sixty-one mice. This is fairly typical of the usual feeding habits of this species, yet Dr. Charles W. Townsend tells me of a Long-eared Owl at Ipswich which fed largely upon birds, some thirteen species being identified in pellets which he collected from this single individual.

Another collection of pellets sent me exhibited the well-known bird-eating characteristics of the Great Horned Owl, and again they contradict the statement of Major Brooks that feathers are not swallowed. Of a dozen pellets, two were smaller and more compact than the others and proved to be composed of the fur and bones of a meadow mouse and of a shrew. The other pellets were composed entirely of feathers and bones of Starlings from a nearby Starling roost. Another lot of pellets from the same source contained no mammal remains but in addition to Starlings contained feathers and bones of Grackles and Cowbirds. Entire primaries and bunches of back and breast feathers were present, and such unmistakable remnants as an entire pelvic girdle, a skull with upper mandible attached, half a dozen upper and lower mandibles, several sterna, as well as wings and legs which still retained their ligamentous connections, and several gizzard linings which were easily recognized as such.

So we have similar indisputable evidence of the food of all our New England hawks and owls. We believe that in most cases these birds are decidedly beneficial. We admit that probably *all* hawks and owls eat *some* birds, and that certain species, notably the three accipitrine hawks and the Great Horned Owl, feed very largely upon birds. But even the last mentioned bird has its good points, as is shown by its feeding on Starlings and Grackles in the instance noted above, in its destruction of Crows at the Ipswich crow roost, and in the vast number of rats which it kills. The Goshawk is considered by Dr. Fisher of the Harvard Forest as the best control on the red squirrel, which is an enemy of forestry as well as an eater of birds and their eggs. It is my belief that only the Sharp-shinned and the Cooper's Hawks are sufficiently common to be considered as economic factors in New England today, and these two species alone of all our hawks and owls may justify "vermin control" measures. Individual treatment may be called for in other cases, as that of the individual Red-tailed

Hawk which has developed a taste for poultry, or the Screech Owl which may frequent the hatching pens at the game farm, or the rare Snowy Owl which may (though we doubt it) attack the captive decoys at a gunning stand. The senseless slaughter of Snowy Owls and the occasional killing of our national emblem, the Bald Eagle, are usually defended by the claim that the birds were "attacking decoys" but, if *control* was desired instead of revenge or a "trophy of skill," blank cartridges would probably serve the purpose without killing these interesting creatures.

Why not admit that hawks and owls kill birds, without condemning them to death? Though they may not always have a "dollars and cents" value, may they not have an esthetic value? Is it not possible that, rare as many species have become, this esthetic value outweighs the small amount of financial loss which may be occasioned by some of our hawks and owls? Must we always condemn as "vermin" anything which kills that which we ourselves wish to kill?

Let's be real sportsmen, not game hogs. Let's grant the Duck Hawk an occasional duck or songbird or street pigeon for the inspiration of watching his flight; let's protect the Snowy Owl for its rarity and beauty and the touch of the Arctic it brings with it; let's spare the dashing Pigeon Hawk, the lumbering Red-tail and Red-shoulder, and the generally beneficial Barred Owl. All others, except the Sharp-shin, Cooper and Goshawk and the Great Horned Owl, are already protected by law in Massachusetts and should be by public sentiment. And even the last four call only for control, certainly not for extermination.

IPSWICH RIVER BIRD TRIP 1929

BY RALPH LAWSON

Our twenty-third annual River Trip was held on May 18th and 19th under very difficult and trying weather conditions.

In accordance with a recently established custom a small group of men stayed over Friday night at the camp owned by Messrs. Bruley and Kimball, which is situated on the river in Danvers Highlands. This group was out at daylight on the 18th, and after breakfast at the camp, walked up to South Middleton to the old paper mills where canoes were waiting just below the dam.

The Spring of 1929 had been mild, and had followed a mild winter. There had been several periods of above normal temperature, but there had also been much east wind, which had kept the migration stream away from the coast. The River was only moderately full, and the foliage somewhat more advanced than normal, which hindered observation.

The Saturday morning walk from the camp to South Middleton was noteworthy in that a pair of Rough-winged Swallows were added to the club's list of species for all trips. These birds were carrying nesting material into a hole near the top of a gravel pit, and were observed for some time under very favorable conditions.

Also a White-crowned Sparrow was found in precisely the same place where a bird of this species had been seen on each of the three preceding trips—quite a remarkable four years' record.

The sky early on Saturday was clear, but clouds gathered soon after sunrise, and rain threatened all day. In spite of this the air was warm, and the breeze light so that quite a satisfactory list of species were recorded before night fall.

Our itinerary from South Middleton varied but little from the usual. Luncheon was eaten on Saturday at Mr. Felt's camp at Howe Station, and Saturday night was spent in tents at Pine Island in the great Wenham Swamp. Just before dark on Saturday evening a large flock of ducks, probably Scoters, passed over The Pines flying north, but they were not seen in time to enable a positive identification. After dark the campfire spread its

accustomed cheer and good fellowship and the day's check up showed that ninety species had been seen.

At daylight Sunday morning there was a brief shower and the wind swung into the east. Breakfast was scarcely over before a heavy mist developed into a rain which lasted more or less throughout the entire day. With the wind and rain the temperature fell, so that altogether the 19th was most unfavorable and disagreeable as to weather. Visibility was poor and birds inactive and silent.

In spite of this "wet blanket" there were a few bright spots notably at Willowdale where canoes were left. Here just below the dam were gathered a large mixed flock of migrant Warblers which remained until all canoes had arrived, and which gave everyone a chance to look them over and study the rare species. Again at Little Neck on the southerly shore were gathered a scattering of the more unusual migrant Warblers which were finding a lee from the driving north-east rain, but that part of the trip which extended from Willowdale to salt water was made in a hard cold rain which did not fail to wet us all, and effectively prevented the use of binoculars.

The following is the list of species recorded during the two days:

A. O. U. No.	A. O. U. No.
7 Loon	263 Spotted Sandpiper
51 Herring Gull	270 Black-bellied Plover
130 Red-breasted Merganser	273 Killdeer
133 Black Duck	274 Semipalmated Plover
144 Wood Duck	300 Ruffed Grouse
190 Bittern	Ring-necked Pheasant
194 Great Blue Heron	316 Mourning Dove
201 Green Heron	331 Marsh Hawk
202 Black-crowned Night Heron	332 Sharp-shinned Hawk
212 Virginia Rail	333 Cooper's Hawk
214 Sora	339 Red-shouldered Hawk
228 Woodcock	360 Sparrow Hawk
230 Wilson's Snipe	387 Yellow-billed Cuckoo
242 Least Sandpiper	388 Black-billed Cuckoo
246 Semipalmated Sandpiper	390 Belted Kingfisher
254 Greater Yellow-legs	393 Hairy Woodpecker
256 Solitary Sandpiper	394c Downy Woodpecker

A. O. U. No.	A. O. U. No.
412a Northern Flicker	617 Rough-winged Swallow
417 Whip-poor-will	619 Cedar Waxwing
423 Chimney Swift	624 Red-eyed Vireo
428 Ruby-throated Hum'gbird	628 Yellow-throated Vireo
444 Kingbird	629 Blue-headed Vireo
452 Crested Flycatcher	636 Black and White Warbler
456 Phoebe	642 Golden-winged Warbler
463 Yellow-bellied Flycatcher	645 Nashville Warbler
466a Alder Flycatcher	648a Northern Parula Warbler
467 Least Flycatcher	650 Cape May Warbler
474b Prairie Horned Lark	652 Yellow Warbler
477 Blue Jay	654 Black-th't'd Blue Warbler
488 American Crow	655 Myrtle Warbler
493 Starling	657 Magnolia Warbler
494 Bobolink	659 Chestnut-sided Warbler
495 Cowbird	660 Bay-breasted Warbler
498 Red-winged Blackbird	661 Black-poll Warbler
501 Meadowlark	662 Blackburnian Warbler
507 Baltimore Oriole	667 Black-th't'd Green Warbler
511b Bronzed Grackle	671 Pine Warbler
517 Purple Finch	673 Prairie Warbler
English Sparrow	674 Oven-bird
529 Goldfinch	675 Water-Thrush
533 Pine Siskin	681 Maryland Yellow-throat
540 Vesper Sparrow	685 Wilson's Warbler
542a Savannah Sparrow	686 Canada Warbler
554 White-crowned Sparrow	687 Redstart
558 White-throated Sparrow	704 Catbird
560 Chipping Sparrow	705 Brown Thrasher
563 Field Sparrow	721 House Wren
581 Song Sparrow	724 Short-billed Marsh Wren
584 Swamp Sparrow	725 Long-billed Marsh Wren
587 Towhee	726 Brown Creeper
595 Rose-breasted Grosbeak	735 Chickadee
598 Indigo Bunting	755 Wood Thrush
608 Scarlet Tanager	756 Veery
612 Cliff Swallow	758a Olive-backed Thrush
613 Barn Swallow	759b Hermit Thrush
614 Tree Swallow	761 Robin
616 Bank Swallow	766 Bluebird

NOTE ON THE YELLOW RAIL, COTURNICOPS NOVEBORACENSIS

HORACE O. GREEN

The Yellow Rail usually seems to be overlooked by the Club Members and is not included in the "Annotated Lists." I think this species is to be found regularly in the meadow near Lynnfield Centre. On September 28, 1929, I shot an adult in good plumage and on October 5th, I shot a male which I judge to be a young bird in his first winter plumage. I also shot an adult in the same meadow on October 3, 1924, and I have found it there on several other occasions and regard it as a regular visitor.

My experience with this bird has convinced me that their usual habitat is in the drier parts of the meadow where wild meadow grass grows thickly, and not often in the wet ground or among cattails, where Snipe, Virginia Rails and Soras may be found. One must almost step on a Yellow Rail to make it fly, and then it will rise barely high enough to clear the vegetation, and after fluttering along for a short distance, it will drop into the grass again.

I have never heard a Yellow Rail utter any note when flushed, but sometimes my attention has been drawn to one by hearing its wings fluttering against the vegetation as it flushed almost under foot.

When seen under favorable conditions their small size and the white areas in their wings make positive identification fairly easy. But some individuals show little white as they fly, and, if seen fluttering along low over the grass and well below the level of the observer's eye, so that only the bird's upper parts are visible, they look very dark colored. To my eye they sometimes appear almost as black as an immature Virginia Rail. On the other hand, when, upon rare occasions, one is flushed among tall cattails, it may rise above the level of the eye and thus expose the under parts to view, or it may permit a side view as it flies past. In this case it may appear almost the color of an immature Sora. For these reasons a positive sight identification is sometimes rather difficult.

Wakefield, Mass.

FURTHER NOTES ON THE GREAT HORNED OWL AT IPSWICH

CHARLES W. TOWNSEND

In my paper on "The Ipswich Crow Roost and the Great Horned Owl" in the issue of this BULLETIN for 1928, I stated that "I never succeeded in finding any nest or young birds" of this Owl at Ipswich. I was away during the winter of 1928-29, but, on my return, found that Mr. Gordon Bowles had caught, on June 2, 1929, a young Great Horned Owl in the southly pitch pine grove in the Ipswich dunes. The bird, which was just able to fly and was, perhaps, six weeks old, was found roosting in an old nest of a Night Heron. The bird was kept as a pet, but could not be tamed and, after a few weeks, was given its freedom.

I was taken to the pine grove on June 9, and saw two young birds and one adult, and found a few owl-pellets of mouse fur and bones on the ground, but there were no pellets in the nest where the young bird had been caught. Nothing more was seen of the Owls until November 5, when, at noon, Mr. F. B. White and I started a Great Horned Owl from this same grove. The bird looked blackish-brown all over, unrelieved by any markings, and suggested a melanistic condition, or possibly the Labrador race, *heterocnemis*.

My next encounter with a Great Horned Owl at Ipswich was spectacular. On November 14, 1929 at 5.30 P. M., as it was growing dark, I was sitting reading in my library when I was startled by the excited barkings of my dog outside. I went at once to the piazza, and, in the dim light, could see, close to the house, a large bird with broad wings and a great rounded head circling about silently not more than thirty feet from the ground, and, at frequent intervals, swooping down at the barking dog. How near it came to the dog, I could not see in the darkness. It was evidently a Great Horned Owl. As the swooping continued in an instinctive if not atavistic mood, I rushed for my gun, but on my return the bird had disappeared. In these last two instances the head of the Owl in flight looked large and the ear-tufts could not be seen. They were probably flattened back. The dog

is a black cocker spaniel a little over two feet long and weighs twenty-six pounds.

Great Horned Owls kill and eat skunks and even porcupines, and Mr. Forbush reports the death of a tomcat from this bird, and says "its vitals had been torn out." I am afraid my dog would have fared ill if the Owl had caught him unawares and struck him with his terrible talons. Fortunately the dog must have seen the bird before it could strike. I am glad I did not call him off, for if he had turned his bold front from the Owl, the latter might have seized him in his vitals. Two weeks later, when I found a distinctive downy feather of a Great Horned Owl under my feeding tray where I had been troubled by rats eating the seeds at night, I was still more glad I had not shot the Owl.

On November 23, Mr. S. Gilbert Emilio and I started two Great Horned Owls from the pine grove in the dunes, one of which looked very black. We gathered a number of large pellets under the tree where they had roosted, and sent them to Dr. Glover M. Allen who kindly examined them. He reported the bones and fur of eleven brown rats, all more or less immature, and of one meadow mouse, and the bones and feathers of two Red-backed Sandpipers. This last finding contradicts the statement of Major Allan Brooks, Canadian Field-Naturalist, 1929, XLIII, p. 160, who states that hawks and owls do not show birds remains in their pellets as they strip these victims of their skin and feathers and eat the flesh and not the bones, the case, doubtless, with large birds. I would also refer him to my report on the pellets of the Long-eared Owl, *Auk*, 1918, XXXV, p. 183, and of the Barn Owl, *Auk*, 1926, XLIII, p. 544. In the case of the Long-eared Owls, 13 different species and 23 individual birds were found in the pellets, and in the case of the Barn Owls, 23 individual bird remains were found.

The Crow roost at Ipswich is unoccupied this year.

THE ARTICHOKE RIVER REGION

S. G. EMILIO

The Artichoke River is a small stream flowing northward into the Merrimac. It rises apparently in West Newbury and crosses into the township of Newburyport for the last mile and a half of its length. There is a dam very near the Merrimac and another perhaps a mile upstream, thus making two reservoirs, from the lower of which water is pumped to the nearby city of Newburyport, Mass. The upper basin covers about one hundred acres,—possibly less,—and as the land, for some distance back from practically all the shores, has been posted as a wild life sanctuary, waterfowl and shore birds congregate here in some numbers and may be observed quite readily. It should be added that the local Grange, I believe, maintains a warden for this Artichoke River Sanctuary, more fully to protect it from violation. About three miles west from Newburyport on the way to Haverhill, the Turkey Hill Road turns southward and runs nearly parallel with the Artichoke River. Westward another mile is Garden Street also running southward, and between these two are four (including the main highway) east-west roads crossing the river and sanctuary and still another crosses the Artichoke near its mouth at the Merrimac.

Two miles further along the Haverhill road we come to the Indian River, so called, but hardly a river at all. The small stream is dammed, however, at the main road and forms a pond of some ten acres. When, as last summer, this pond is drained off (or the River dries up) the shore birds and herons—and ducks too—seem to consider the place a most favorable spot. It was here, in early August 1929 that, perhaps, the largest gathering of white herons ever known in Massachusetts was found. Fifty-two white-plumaged Little Blue Herons were seen here at one time,—an astonishing sight for this latitude. Black-crowned Night Herons,—immature predominating,—could be seen there from July well into September, and Green and Great Blue Herons and at least one Egret were also observed at various times on the Indian River flats, as well as in the more extensive Artichoke Sanctuary.

In general, one may expect to find on the Indian or Artichoke River flats, if exposed, many of the mud-loving sandpipers, plovers and their ilk between July 15 and October 1, and some species much later, as well as the herons above enumerated, though the white ones rarely stay later than early September. Probably the best time of day is approximately at high tide.

The Least Sandpiper was most numerous of the shore birds, though very many Semipalmated Sandpipers also came to Indian River. For weeks after the breeding season, Killdeer were there in numbers and the Semipalmated Plover came in large and small flocks but probably were not as sedentary as the Killdeer. In early August a lone Wilson's Snipe appeared, weeks ahead of schedule. Dowitchers,—so common everywhere this last year,—were often found at Indian River and White-rumped, Pectoral, both Yellow-legs and the rather rare Stilt Sandpiper in numbers up to six at a time, and, I think, the Baird's Sandpiper was also detected there. Spotted and Solitary, our two inland Sandpipers, were often seen and these about conclude the list of shore birds.

The ducks I saw at this drained off area of the Indian River, were few,—Blacks and Green, and Blue-winged Teal, but we certainly had a wonderful opportunity to watch the evolutions of a flock of suspicious (or were they trustful?) Blue-wings before they alighted on what appeared to be mud but actually was water, full of vegetation.

Only at the extreme south end of the Artichoke are conditions, in dry seasons, similar to those at the Indian River, but there is a much more extensive area of shallow water and exposed flats. The greater amount of water is attractive to more ducks and in September we found three of the rare Shovellers there, Pintails, and later Baldpates and Lesser Scaup. In the large basin north of this shallow area, great numbers of ducks often congregate during October and part of November. Blacks predominate, with Scaup, perhaps, next. The Blue-wings, however, were very numerous this year, but they may be counted upon to depart largely in September, leaving the Green-wings to stay longer into October. There was a gathering of about thirty Wood Ducks at the Artichoke this fall, if I have been correctly informed, though I did not see as many at once. I did see a few

Mallards but missed the Hooded Mergansers observed by others, and I do not know that any one detected either Red-heads or Ring-necks with the Lesser Scaup. In November, the sea-ducks began to drop in and I saw Golden-eyes and a few White-winged Scoters.

We found two drake Ruddy Ducks at an extremely early fall date on the Merrimac near the mouth of the Artichoke, and occasional Ruddies were seen throughout the fall in the sanctuary. And this leads me to say few words about the locality where the early Ruddies were seen.

Westward from the mouth of the Artichoke for nearly two miles along the south side of the Merrimac is an area of wild rice and marsh of varying width which may be very interesting up to September 16 when the gunning season opens. In addition to ducks, great numbers of Red-winged Blackbirds frequent the rice during the moulting period and perhaps even later, and the Sora Rails when disturbed will sing a weirdly interesting chorus. Along much of this stretch runs a country road, so low and close to the river as to be overflowed in places by very high tides.

The lower basin of the Artichoke, near the pumping station, has also been most interesting at times. Early in September a bunch of about forty Blue-winged Teal and as many Black Ducks jumped from the extensive area of pickerel-weed, etc. almost within stone's throw of the main highway. Further exploration up stream revealed eight or ten Wood Ducks and we saw, momentarily, on this and another occasion, an immature Florida Gallinule. American Coot must drop in there on migration, but I saw none this last year. The Pied-billed Grebe, however, could be found almost anytime this fall along the Artichoke,—a bird here and there. On one expedition to this lower basin we saw ten Great Blue Herons, clumsily, but somewhat majestically, leave our vicinity, one after another, for more secluded haunts.

At the extreme upper, or south end of the large basin the Pectoral Sandpiper stayed late, in numbers up to nine, and on the extremely late date of November 24, with all still water ice-covered, Mr. Preston and I saw a lone Pectoral wading, belly deep, in the little stream running in from the southward. Another interesting find in this area was an Hudsonian Godwit,—

my only one for the year,—observed within its usual migratory dates.

There remains but one species to mention,—the American Merganser. In the fall I did not see it but Mr. Stubbs and I, braving the terrible country roads last spring as the frost was leaving the ground, found many of these birds in the large basin and assume they come each year as soon as the ice goes out.

So, as this rambling account comes to a close, it is evident that many of our ducks and herons and shore birds can be found in this Artichoke region concentrated to an unusual degree and easily accessible to the prying eyes of the bird student.



AN INVASION OF LITTLE BLUE HERONS IN ESSEX COUNTY IN THE SUMMER OF 1929

CHARLES W. TOWNSEND

The Little Blue Heron, *Florida cærulea*, at the present day, does not breed north of Virginia, but, as is the habit of herons, it is apt to wander north after the breeding season. Prior to 1905 there is only one record for this bird in Essex County, one taken at Ipswich on August 10, 1881. In the Supplement to the Birds of Essex County published in 1920, I was able to add two other records for the County. Since that time, as the bird has continued to increase in the south under protection, more have wandered north, and of those reported, none, as far as I know, has been shot. All that have been recorded in the Bulletin of the Club are as follows: 1923, 1; 1924, 6 to 11, 1925, 7 or 8; 1926, 1; 1927, 0; 1928, 2.

In 1929 a notable invasion of Little Blue Herons took place, much greater in numbers than all the previous records together. All the birds were in the juvenal plumage, a plumage that is wholly white except the very tips of the primaries which are blueish gray and often escape notice. Bent, in his Life History of this bird, speaking of the white plumage, says: "It is worn during the first fall and winter without much change; I have seen it as late as May 1. But usually young birds begin to acquire some blue in the plumage by February, which increases during the spring. Young birds are often found breeding in this first nuptial, mixed plumage, which has suggested the idea that they are adults in a white phase."

My personal experience with the Little Blue Heron in the summer of 1929 is as follows: On July 28, my son-in-law, Mr. Wendell Taber, discovered seven of these birds at Sagamore Pond near my house at Ipswich, and at once notified me. The birds were unsuspicious and allowed an approach in the open to within fifty yards, and, by keeping concealed, I was able to approach within twenty yards and secured photographs of all seven. These birds and others continued to frequent the shores of the pond and nearby salt marshes for three or four weeks. On August 10, I was able to count ten of them in the salt marshes from my

house, and the next day there were nine in the marshes and one at Sagamore Pond. In the meanwhile I had obtained reports that large numbers of Little Blue Herons in juvenal plumage had been seen at Indian River, West Newbury by Charles E. Clarke, George L. Perry, Ludlow Griscom and others,—as many as fifty-two having been counted there at one time. I visited this place, an extensive area of mud-flats partially dried, on August 14 and found twenty-four of these beautiful birds. They were in plain sight from a well travelled road. Again, on August 18, I found twenty-two there, but none on September 5, although two were found not far away at the ponds of the Artichoke River. On September 7, I saw one at Sagamore Pond, and my last sight of the birds was on September 10, when there were two at the pond and one in the marshes.

The other records for the Club for Essex County in addition to these, are as follows: July 27, 3 birds seen at Four Mile Pond and 53 on August 7, at Indian River, both records by Warden Babson. Mr. Stubbs saw 5 birds at Crooked Pond on August 28.

During this summer about three hundred Little Blue Herons were reported to Dr. May at the State House, and he has kindly placed these reports at my disposal. The birds were seen by various observers in Connecticut, Rhode Island and Massachusetts. In other years there have been rare records for this bird in the northern New England States, Nova Scotia and Quebec. The invasion appears to have begun about the twentieth of July, and nearly all birds had gone by the end of August. The latest date is of a bird seen by Dr. May near New Haven, Conn., on October 20, and the earliest was one seen on June 23 at Pelham, Mass. Both of these birds were in adult plumage, and are the only ones reported in this plumage, all the rest being in the immature white plumage.

The extent of the northern invasion of Little Blue Herons is shown by the report of Dr. Witmer Stone, (*Auk*, 1929, 46, p. 537), of 549 of these birds roosting near Cape May, N. J., during the latter part of the summer. Previous to this year, the largest number seen there was about thirty. It is evident that the breeding season of 1929 in the South was unusually successful.

EXTRACTS FROM REPORTS OF GAME WARDEN,
EDWARD BABSON OF NEWBURYPORT

August, 1929.

At the present time there are two interesting colonies of birds to be seen in my district. In a little pond which is the source of the Indian River, near the state highway on Pipestave Hill, West Newbury, are two Egrets and a flock of fifty-three Little Blue Herons. This pond has recently been drawn off, leaving the bottom soft with mud, and besides the herons there are countless numbers of marsh birds there. Among those noted are Killdeer, Stilt and Solitary Sandpipers, Dowitchers, Least Peep, Greater and Lesser Yellow-legs.

On the meadows bordering the Plum Island Turnpike, near the Newbury-Newburyport bound-stone, are twenty-three Upland Plover. Many of these birds were raised right in that vicinity. Three years ago there were three pairs known to be nesting there. Each year since the closed season on marsh birds became effective there has been a noticeable increase in their numbers here. On Tuesday, July 2nd, 1929, I saw an old Upland Plover with five young here. The young had feathers on which down was still attached, and they could fly quite well for their size and age. I can cite several other places where there are broods of Upland Plover in Newbury and West Newbury. Dr. John C. Phillips of Wenham, viewed these colonies with me today with much interest.

Broods of our native Black Ducks are showing up now on several of my fresh rivers, though not in the numbers seen in 1922, 1923 and 1924. I have also seen several Wood Ducks on the Ipswich, Parker and Powow Rivers at various times this summer, so I feel certain that they must have been nesting somewhere about there, though I have not seen or heard of any young Wood Duck being seen by anyone this summer.

At dusk on Monday, July 15, 1929, while on my way from West Newbury to Georgetown, on what is known as the Banks Road, I saw an adult Great Horned Owl sitting in the road on the down slope of a little hill. My headlights put her to flight about twenty-five feet from me and she flew straight away from me down this road; while from trees on both sides of this road

six young Owls took wing and followed her, after alighting several times on trees beside the way, from which my auto frightened them.

There was a very good spring flight of Snipe and Woodcock here abouts this year, but I did not think the spring flight of Geese and Greater Yellow-legs seemed quite up to their usual numbers. I know of three broods of Woodcock being reared in this city this season. I saw an old Woodcock, with three downy young that were partially feathered out, and which could fly, in Turkey Hill Road, Newburyport, the latter part of June.

December, 1929.

I believe that there is a slight increase in the number of Piping Plover breeding each year on Plum Island. Each year sees a very noticeable increase in the numbers of Kildeers and Mourning Doves breeding in this locality. On June 19th, 1929, I saw an old Quail, with 14 young that could fly a little, beside a road in Middleton, near Nichols' Brook. I have received reliable reports of several bevies being observed in Newbury, Georgetown and West Boxford. The duck shooting season, taken as a whole, has been the poorest without exception that was ever known hereabouts. Since the first of the month it improved slightly with the coming of the Golden-eyes and Red-legged Black Ducks. On Friday, October 25th, there was an exceptional flight of Baldpates in this locality. Many were taken in the harbor here that day, but there were few seen thereafter.

Both the Greater and Lesser Scaups, while scarce have been remaining about the Merrimac river later than usual this year. I saw a large male Scaup taken by two Amesbury duck hunters on the river near Carr's Island, Salisbury, on December 14th. On this same date I jumped three Jacksnipe from a small spring-hole in Boggy Meadow, Salisbury.

On Wednesday, October 23rd, while duck hunting at Indian River, West Newbury, I shot down a male Shoveller that I was unable to get. It was one of five that swung wide to our callers. Within the past two weeks I have seen two male Barrow's Golden-eyes about the outlet of our city sewer on several occasions; and there, too, I have seen as many as 43 Buffle-heads.

Canada Geese were uncommonly scarce up until the first of

December, when a considerable number came along during the next two weeks. More geese were taken locally then, than is usually the case. I know of fifty-five having been killed hereabouts, during that period.

From my personal observation I am convinced that the Ruffed Grouse has increased slightly in certain localities, while in others it is scarce or below normal. "Spotty" would be a good way of explaining its present status hereabouts. During the present open season on deer I was detailed to assist Warden Shea for a week in the western part of the State. On two former occasions while detailed to special work in this same district I had found Ruffed Grouse numerous in Pelham, Prescott and Enfield. But this year I saw only six Grouse, and but few more tracks and signs of them in a week's patrol of these same covers. From information received from other wardens it is evident that this scarcity exists in most of these western covers, and I am of the opinion that Grouse are far more numerous in the eastern part of the State than what they are out that way.

The extremely hot, dry weather prevailing at the opening of the upland game season greatly restrained both man and dog from the rather too intensive pursuit of same, and at the same time served as a warning to large flocks of Pheasants to scatter and take cover. The results were fewer Pheasants were killed, and our covers now contain more Pheasants than we have had for five years. There is a noticeable increase in the number of hen Pheasants now to be found in our covers, which would seem to indicate that the prohibition against taking them has been more generally observed this season than heretofore. Perfect weather during the nesting and rearing season must have also contributed to this year's increase in both Ruffed Grouse and Pheasants.

Native Woodcock were present in about normal numbers, but left before the season opened, as usual. Flight Woodcock from the north because of the drought prevailing here, were conspicuous by their scarcity. On the other hand, and under the same conditions, Snipe were more numerous than I ever saw them before. I found them in absolutely dry hay-fields bordering the Merrimac River, in Amesbury, from which a second crop had just been cut; and at the Indian River rice-fields, West Newbury,

Scragg Pond, Geogetown and even on the salt marsh bordering Plum Island.

About the 10th of November I received reports of two very large strange Hawks or Eagles seen feeding on Pheasants near the Salisbury causeway, leading from Ring's Island. On the 13th of November Warden Herbert H. Cooke, 74 Monument Street, Concord, Massachusetts, and I saw one of these birds sitting on top of a telegraph pole near this causeway eating a rat. With our binoculars we were afforded an excellent opportunity to identify it as a Black Gyrfalcon, from pictures and descriptions given in Vol. II, of Forbush Bird Book. On the 9th of November he and I saw a large Bald Eagle in Paradise Woods, Ipswich.

CHARLES JOHNSON MAYNARD

The name of Charles Johnson Maynard is closely connected with Essex County, particularly with Ipswich, for, in the Ipswich dunes on December 4, 1868, he collected a species hitherto unknown to science, the Ipswich Sparrow. For two years this bird was believed to be the Baird's Sparrow, and was so called by Mr. Maynard in the *American Naturalist* for December, 1869, and in his *Naturalist's Guide*, which was published in 1870 with a plate of the bird. In the October *Naturalist* for 1872 Mr. Maynard corrected the mistake and named the new species "*Passerculus princeps*, the large Barren Ground Sparrow." The latter name however, did not prevail and the bird is always known as the Ipswich Sparrow.

Charles Johnson Maynard was born of English pioneer ancestry at West Newton, Massachusetts on May 6, 1845, and he died there in his eighty-fifth year on October 15, 1929. All his life he lived in West Newton except when he was away on collecting trips and for three years, 1871 to 1874, when he lived in Ipswich. He early developed a taste for natural history and the collection of specimens, and he established a taxidermy business in Boston.

His collecting trips covered the period between 1868 and 1924, and included nine trips to Florida and five to the Bahamas. One of his first jobs in taxidermy was to unpack and put on

freshly painted stands the famous Lafresnaye collection of mounted birds given to the Boston Society of Natural History by Dr. Henry Bryant in 1866. In that year he was engaged to collect birds for E. A. Samuels, the curator of the State Cabinet and author of the *Birds of New England*.

For two years he was a resident member of the Nuttall Ornithological Club, and with Henry A. Purdie, he edited the first number of the *Bulletin* of the Club for April, 1876. In 1924 he was made an Honorary Member of the Club and in 1912 an Associate Member of the American Ornithologists Union.

As a publisher of his own books he was prolific, and with the exception of *The Naturalist's Guide* and a few articles published elsewhere, he not only set up the type and printed his own books, but he made his own woodcuts. Only a few of the titles can be mentioned here: *The Naturalist's Guide*, *Birds of Eastern North America*, *Manual of North American Butterflies*, *Sparrows and Finches of New England*, *Warblers of New England*, *Vocal Organs of Talking Birds*, *Monograph of Genus Cerion*.

Maynard, although chiefly interested in birds, was keenly alert for the study of everything in nature. As an observer he was keen and accurate, and his writings abound in interesting and original observations. For many years he headed bird walks, and these often led him to his familiar Ipswich dunes and beach. In these walks he was surrounded by pupils who hung on his every word, and his enthusiasm for nature study was highly stimulating to large numbers that came under his influence.

—C. W. T.

ANNOTATED LIST OF BIRDS OBSERVED BY THE ESSEX
COUNTY ORNITHOLOGICAL CLUB DURING 1929

ARTHUR P. STUBBS, RECORDER

The excellent field work, which brought such pleasing results in 1928 has been continued through 1929 and as the field trips of various members of the club have extended into parts of the County, seldom or never studied by them before, a much wider knowledge of Essex avifauna has been gained and this annual list has become more fairly a County list than ever before. The Recorder hopes that our field trips will become so frequent and so extended that each important bird haunt in Essex County will be covered by parties of members and reported upon so thoroughly that our annual list will be an authoritative census of species, if not of individual birds, present for each year.

The weather of the first three months was somewhat above normal in temperature, although a fair ice crop was gathered. The snowfall for the first four months totalled 39 1-2 inches with rain and warm spells enough to take care of it so that there were but fourteen days upon which sleighing was possible. Precipitation of all sorts was rather below normal until April which was variable in temperature with a normal precipitation mainly of rain.

May was above normal in temperature and slightly below in precipitation. Five days were 80 and two above 90 degrees in temperature.

On the whole, there were no local undue hindrances to bird migration, but, during April and possibly a part of March, severe storms to the southward did disrupt the natural course of things, delaying birds in some instances and forcing others north far ahead of their normal dates of arrival or beyond their normal migration range.

The rainfall of June was a bit below normal. The first of the month was cool, but warm weather during the latter half brought the average temperature up to two degrees above normal.

July was normal in heat but low in rainfall. The average daily temperature was 66.56 degrees.

In spite of several heavy thunder showers the rainfall of

August was below normal. The average daily temperature was 62.3 degrees.

September was a warm dry month. The temperature was above normal, the daily average being 58.49 degrees, with a record of seventeen fair days.

October was a fine month with eighteen clear days, five cloudy days, while rain fell on eight days. Average daily temperature 46.43.

November, even with a cold snap at the close of the month, was above normal in temperature, the daily average being 38.24 degrees which is five degrees above normal. There were thirteen fair days, three cloudy or foggy days, twelve days upon which rain fell and three days upon which snow fell. The total snowfall was 2 $\frac{1}{2}$ inches.

December was a very erratic month although not far from normal in Essex County. The average daily temperature was 27.59 degrees. Rain fell on seven days, snow on seven days, sleet on two days and thirteen days were clear or fair. Total snowfall 11 inches.

The dry weather of late summer, possibly creating a dearth of insect food, apparently induced an early southern migration of our breeding land birds. There was an abundant fall migration of shore birds and a very good showing, as to number of species, of water-fowl. Salt water birds in good numbers came on schedule time.

A Club Christmas Bird Census made on Sunday, December 22, netted a total of 53 species and 4,893 individuals.

A. O. U.

No.

2. Holboell's Grebe. May 2; October 12. Present in unusual numbers until the time of leaving for the north. Fall numbers not so great.
3. Horned Grebe. May 2; October 5. Present in usual numbers.
6. Pied-billed Grebe. March 28 to April 28; September 1 to November 10. Comparatively few reported.
7. Loon. June 9; September 5. Present in usual numbers.

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11. Red-throated Loon. April 20; October 23. Not so common as above species.
 13. Puffin. February 3. Only record for the year reported by Griscom.
 27. Black Guillemot. February 10 and 24; November 20. Not numerous.
 32. Razor-billed Auk. April 20, Griscom. Single record for year.
 34. Dovekie. January up to February 27; December 16. Somewhat common.
 36. Pomarine Jaeger. September 15 to 19, Townsend. Small numbers.
 37. Parasitic Jaeger. August 4 to September 19, Townsend. More frequent than above species.
 40. Kittiwake. Unusually common off shore up to February 24, Griscom; December 8, Griscom.
 42. Glaucous Gull. Frequently recorded up to April 20, Griscom; December 29, Emilio.
 43. Iceland Gull. Frequently recorded up to March 3, Griscom; December 19, Townsend and Emilio.
 45. Kumlien's Gull. April 25. Single record. Emilio.
 47. Great Black-backed Gull. Present in usual numbers. A few spent the summer.
 51. Herring Gull. Present in usual numbers. Definitely placed as breeding in Salem Bay.
 54. Ring-billed Gull. April 6 to 20; September 5 to 16. Changes on the water front of Lynn harbor are probably the cause of our failing to carry records of this species through the summer as in several previous years.
 58. Laughing Gull. April 25, Emilio, to September 16. Not known to breed in the County but present in varying numbers.
 60. Bonaparte's Gull. February 22; May 22 to June 5; August 4 to the end of the year. Probably the June to August break could have been filled if the small gulls had not been driven from their favorite roost in Lynn harbor. Very numerous along shore during the fall and early winter.

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70. Common Tern. May 15 to October 12. Present in usual numbers.
72. Roseate Tern. June 5 to September 15. Apparently becoming more common each year.
117. Gannet. October 12 to November 24. Usual numbers reported during the fall but there were no spring records.
119. Cormorant. April 20; October 5. In good numbers about the ledgey islands of Salem harbor and Marblehead.
120. Double-crested Cormorant. April 23, Griscom, to June 5, Emilio; August 20 to December 22, Griscom. Spring record beaten by two days and the late fall record by nearly a month. Identifications positive.
129. American Merganser. April 6; November 24. Good numbers in the larger Essex County ponds as soon as the ice opened until the April date.
130. Red-breasted Merganser. May 25, June 16; September 15. Probably present in small numbers throughout the year but abundant from late October to mid-April.
131. Hooded Merganser. November 17, Sagamore Pond. Only one record.
132. Mallard. September 15 and October 9. A few stray wild birds were reported.
133. Red-legged Black Duck. Present. The usual concourse of several hundred of Blacks were present in Lynn harbor off Little Nahant during the early months of the year and late November and whole of December. Observers as a rule consider the greater part of this group to be of the Red-legged sub-species. Their presence at this point is coincident with the closing of local fresh water by ice.
- 133a. Black Duck. Present. This sub-species breeds rather commonly in every favorable fresh water mudhole and a part at least of these local breeders probably winter in Lynn harbor with the Red-legs.
137. Baldpate. March 17, Griscom; October 12 to November 10. Among the ducks at Artichoke Sanctuary during the fall, also one was seen on the later date in the United Shoe Machinery Pond at Beverly.

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139. Green-winged Teal. March 26 to May 8; September 1 to November 10. Common during the spring at Clark's Pond and in the fall at Artichoke Reservation.
140. Blue-winged Teal. April 9 to 28; September 1 to October 13. The early spring date was of a single bird seen for several days about Farm Pond, Fay Estate. The fall birds were seen mainly at Artichoke.
142. Shoveller. September 5 and 15; October 23. A small number of females seen at Artichoke Sanctuary. One shot by Babson at Indian River, West Newbury.
143. Pintail. September 1 and November 10. Single birds seen on the above dates at Artichoke.
144. Wood Duck. March 17 to October 16. Said to have bred in some numbers locally.
146. Redhead. October 16. A single record, Johnson's Pond, Groveland.
148. Scaup. April 20; October 5. Usual numbers.
149. Lesser Scaup. April 3; October 27 to November 10. Usual numbers.
150. Ring-necked Duck. April 20 and October 5. Only two birds reported.
151. American Golden-eye. May 2; October 30. Abundant species from December to April.
152. Barrow's Golden-eye. March 27; December 7. Still true to its Sliding Rock station but in rather smaller numbers through 1929. Two reported from Newburyport the last week in December.
153. Buffle-head. May 2; October 12. Apparently becoming more common and spreading farther along shore.
154. Old-squaw. May 22; October 23. Very common species.
155. Harlequin. December 22. One seen off Manchester during the making of the Club Christmas Census.
160. Eider. February 6 and March 3; November 30. Very few reported.
163. American Scoter. June 9; October 2. The June bird was seen by Townsend.
165. White-winged Scoter. June 9; July 24. Very common species.

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166. Surf Scoter. June 9; October 2. Very common species, but not so numerous in mid-winter as preceeding.
167. Ruddy Duck. September 5 to November 10. The early fall date is of two birds seen in the Merrimac River near the mouth of Indian River by Emilio, Townsend and Stubbs.
- Snow Goose. November 28. A flock of twenty-five in Wenham Lake. Species in question. J. C. Phillips.
172. Canada Goose. March 3 to April 20; October 12 to December 8. Good flights.
- 173a. Brant. October 5 to November 18. Uncommon species.
190. Bittern. April 8 to October 16. Present in average numbers.
194. Great Blue Heron. April 3 to May 30; August 8 into December. A single bird was about Hall's Brook, Lynn, well into December.
196. Egret. July 31 and August 14. Seen in the Ipswich region.
200. Little Blue Heron. July 27 to September 7. Unusually large post-breeding northward flight. See page 50.
201. Green Heron. April 28 to September 25. Present in average numbers.
202. Black-crowned Night Heron. March to November 23. Wintered during 1928-29 and again present during December 1929 at Peach's Point, Marblehead. Present in average numbers.
203. Yellow-crowned Night Heron. August 3 and 4. A single bird seen by Townsend at Sagamore Pond on the first date and bird seen by Emilio near Eagle Hill on the later date, both in Ipswich.
212. Virginia Rail. April 7 to September 22. Unfortunately few reported.
214. Sora. May 13 to October 9. Status same as above species.
215. Yellow Rail. The call of this species was plainly heard, it being repeated several times, on the evening of May 29, coming from the meadow of the Ipswich River, near the Club Camp in Boxford, by Emilio and Stubbs. Also heard by Griscom and Lawson in late April. In this

connection it is interesting to call attention to Mr. Green's article on page 43.

- 219. Florida Gallinule. September 1 and 15. Identified on these dates at Artichoke Sanctuary by Griscom.
- 221. Coot. April 9 to May 1; October 28 to November 16. Comparatively few reported.
- 223. Northern Phalarope. May 29. A single bird with a bunch of small Sandpipers on the rocks near Clark's Pond, Ipswich. Identified by Emilio.
- 224. Wilson's Phalarope. On September 15, a single bird was seen by Emilio and Griscom at Newburyport; on the next day, September 16, a single bird was collected by Emilio on Powow River, Amesbury.
- 228. Woodcock. March 19 to November 10. About average numbers.
- 230. Wilson's Snipe. Wintered and again present in December at Hall's Brook, Lynn. April 14 to May 19; August 11, C. E. Clarke, to October 19, December 8 and 22.
- 231. Dowitcher. May 8; July 18 to October 12. Unusually abundant during the fall.
- 233. Stilt Sandpiper. August 8 to September 1. "More records than usual" Griscom.
- 234. Knot. May 29; August 22 to October 12. Present in fair numbers.
- 235. Purple Sandpiper. April 28; November 13. Common in the colder months on the outlying ledges.
- 239. Pectoral Sandpiper. April 28; August 4 to November 24. Unusually numerous during the fall.
- 240. White-rumped Sandpiper. May 25 to 29; August 17 to November 13. Heavy fall flight.
- 242. Least Sandpiper. May 18 to 29; July 31 to October 12. Normal numbers.
- 243a. Red-backed Sandpiper. May 8; October 2 to November 24. Average fall flight.
- 246. Semi-palmated Sandpiper. May 8 to June 9; July 31 to October 27. The usual heavy fall flight.
- 248. Sanderling. May 16 to June 9; July 2 to November 25. Heavy fall flight.

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249. Marbled Godwit. September 1, 5 and 15. Seen and on the last date collected at Newburyport. See 'Auk' for January 1930, page 77.
251. Hudsonian Godwit. July 24 to October 13. Ipswich and Artichoke Sanctuary.
254. Greater Yellow-legs. April 28 to June 10; July 31 to December 7. Good fall flight.
255. Yellow-legs. May 12 to 29; July 31 to October 12. "Very heavy fall flight" Griscom.
256. Solitary Sandpiper. May 7 to 22; August 2 to October 20, Present in usual numbers.
258. Willet. September 1. Ipswich, Townsend.
261. Upland Plover. May 30 to September 8. Bred successfully near Newburyport. See communication from Warden Babson on page 52.
263. Spotted Sandpiper. May 6 to October 16. Present in usual numbers.
265. Hudsonian Curlew. July 15 to September 4. "Unusually numerous. Griscom.
270. Black-bellied Plover. May 8 to June 5; July 19 to November 24. Good flights spring and fall.
272. Golden Plover. September 15 to October 16. Few reported.
273. Killdeer. January 6, March 17 to November 10, December 22. The January and December dates are of a bird seen about the causeway end of Marblehead Harbor. This species appears to breed in suitable locations well over the County.
274. Semipalmated Plover. May 8 to June 5; July 31 to October 27. Good spring and fall flights.
277. Piping Plover. April 6 to June 5. This species seems to have been neglected by our observers.
- 283a. Ruddy Turnstone. August 4 to September 29. Present in average numbers.
289. Bob White. Bred in the Newburys this year, Warden Babson.
300. Ruffed Grouse. Enough reported to indicate that the species is about holding its own in the County. No open season this year.

- Ring-necked Pheasant. Status but little changed during the past two or three years.
316. Mourning Dove. March 17 to December 8. This species is holding its own and shows a disposition to winter in some numbers if conditions are favorable.
331. Marsh Hawk. March 17 to November 10. Locally common species.
332. Sharp-shinned Hawk. Present. Theoretically a breeding, resident species but there has been little proof of it reported during 1930.
333. Cooper's Hawk. Present. Status much as above but if anything more uncommon.
334. Goshawk. November 17, Ipswich, Townsend; December 15, Spring Pond, Lynn, Moulton.
337. Red-tailed Hawk. October 9. Newburyport, Emilio and Stubbs. Probably a migrant.
339. Red-shouldered Hawk. Present but not so common as in previous years.
343. Broad-winged Hawk. August 4 to September 10. Reported from Ipswich by Townsend.
- 347a. Rough-legged Hawk. September 15 to December 28. During the above period from four to six birds of this species, in varying plumage, were about the water front of Ipswich and were seen by several observers. Many seen in the County.
352. Bald Eagle. April 28, Emilio; November 24, Townsend. An uncommon species in Essex County.
- 356a. Duck Hawk. September 16 to October 13. Uncommon species.
357. Pigeon Hawk. April 19 to May 30; September 5 to October 9. Seemingly more have been seen this season than for several years.
360. Sparrow Hawk. Present in average numbers.
364. Osprey. April 9 to October 6. About average numbers reported.
366. Long-eared Owl. November 23, two specimens were brought to Peabody Museum.
367. Short-eared Owl. Plum Island, October 12, Emilio.

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368. Barred Owl. Present, but few reported.
373. Screech Owl. Present, but few reported.
375. Great Horned Owl. Several reported during the year.
Bred in Ipswich Dunes, Townsend.
376. Snowy Owl. February 23, Topsfield, Col. Ropes.
387. Yellow-billed Cuckoo. May 18 to June 9. Very few reported.
388. Black-billed Cuckoo. May 18 to June 30. By no means plentiful.
390. Belted Kingfisher. March 13 to December 28. Present in average numbers.
393. Hairy Woodpecker. Present in usual numbers.
- 394c. Downy Woodpecker. Present in usual numbers.
402. Yellow-bellied Sapsucker. April 7 to May 5; October 5 to November 11. Normal flights spring and fall.
- 412a. Northern Flicker. Present in usual numbers but not numerous in the colder months.
417. Whip-poor-will. May 1 to September 1. Usual numbers apparently present.
420. Nighthawk. May 16 to 29; August 6 to 31. No breeding birds reported, apparently migrants only seen.
423. Chimney Swift. May 1 to October 5. Average numbers observed.
428. Ruby-throated Hummingbird. May 4 to October 29. The late date for this species is remarkable as it is even a state record, but Moulton, who made it, is a very careful observer and very familiar with the species and it is the opinion of the Recorder that the record should stand.
444. Kingbird. April 28, Emilio, to September 5. This very early spring date is a probable result of the southern storms noted in the introduction to this list. Usual good numbers during the breeding season.
452. Crested Flycatcher. May 11 to June 30. Uncommon breeding resident.
456. Phoebe. March 15 to October 9. Present in average numbers.
459. Olive-sided Flycatcher. May 27. Only one reported.

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461. Wood Pewee. May 25 to September 1. Apparently not so common as usual.
463. Yellow-bellied Flycatcher. May 19 and 27. Two birds reported.
- 466a. Alder Flycatcher. May 28 and June 16. Reported from Reedy Meadows, Lynnfield, on both of the above dates. Supposed to be breeding.
467. Least Flycatcher. May 5 to—. Apparently not so numerous as in previous years.
474. Horned Lark. May 7; October 27. Locally common.
- 474b. Prairie Horned Lark. March 17 to September 23. Breeds sparingly in several parts of the County.
477. Blue Jay. Very common resident species.
488. Crow. Very common resident species.
493. Starling. Very common introduced resident species.
494. Bobolink. May 9 to September 5. Locally common species.
495. Cowbird. Wintered in Danvers in some numbers. March 22 to October 6. Generally common species.
498. Red-winged Blackbird. March 7 to November 10. Common species about swamp lands. It is interesting to note that after the Red-wings had disappeared from local breeding grounds, they were found in large numbers in the great stretch of wild rice where Indian River enters the Merrimac. A single Redwing was seen there as late as November 10.
501. Meadowlark. A twelve month species during 1929 and probably nearly every year in favorable locations but the majority move southward.
507. Baltimore Oriole. May 2 to September 5. A very welcome summer resident that seems to be holding its own.
509. Rusty Blackbird. March 13 to May 25, Emilio; August 28, Emilio and Stubbs to October 27. Common migrant.
- 511b. Bronzed Grackle. Wintered. March 4 to November 16. Abundant summer resident while a few stragglers probably stop with us nearly every winter.
514. Evening Grosbeak. A few individuals spent the winter at Topsfield, the last one being seen on April 23.
515. Pine Grosbeak. A few were seen in January and they

returned in force, as the cold weather came again at the close of the year, having been seen in numbers in several places at the time of the Christmas Bird Census, on December 22 and up to the close of the year.

517. Purple Finch. Resident breeding species but most numerous in winter.
House Sparrow. Introduced resident species, common but dwindling in numbers rather than increasing.
521. Red Crossbill. April 20. Very few reported.
522. White-winged Crossbill. A few were seen on the December 22 census trip.
528. Redpoll. January 27 to March 27; December 22. By no means numerous.
529. Goldfinch. Irregularly present in varying numbers.
533. Pine Siskin. May 25; November 17. This has not been a Siskin year.
534. Snow Bunting. March 20; October 20. Abundant along shore during the late fall.
536. Lapland Longspur. October 12 to December 19. Present in fair numbers.
540. Vesper Sparrow. March 31 to November 10. Locally common species.
541. Ipswich Sparrow. February 6; October 28 to December 29. Very rare winter resident.
- 542a. Savannah Sparrow. April 8 to October 20. Locally common species.
549. Sharp-tailed Sparrow. September 1 to 24. Locally common but very furtive species.
- 549.1a. Acadian Sharp-tailed Sparrow. September 24. Occasionally found with above species during migration.
554. White-crowned Sparrow. May 7 to 25; October 5 to 28. Uncommon migrant.
558. White-throated Sparrow. This year, as it frequently is a twelve month species in Essex County, a few breeding and a few wintering, while abundant during migration.
559. Tree Sparrow. May 2; October 27. Abundant winter visitor.
560. Chipping Sparrow. One bird was about Mrs. Conley's

feeding station in Topsfield in January. April 23 to November 12. Very common summer resident.

- 563. Field Sparrow. January 27, Emilio. March 31 to November 2. Common summer resident.
- 567. Slate-colored Junco. May 8; September 21. Very common in migration but apt to be scattering in mid-winter.
- 581. Song Sparrow. Present in small numbers during mid-winter but abundant from early March to November.
- 583. Lincoln's Sparrow. May 10 and 13; September 29. Rare migrant species.
- 584. Swamp Sparrow. January 9, April 5 to November 2, December 8. Not quite a twelve month record but this bird often does spend the winter in some warm nook beside his beloved swamp.
- 585. Fox Sparrow. Wintered through to April 20; October 19 to December 22. Variable migrant, not uncommon winter resident.
- 587. Towhee. April 22 to October 6. Common summer resident.
- 595. Rose-breasted Grosbeak. May 4 to September 9. Fairly common summer resident.
- 598. Indigo Bunting. On April 20, three birds were seen and one was collected beside Eagle Hill Road, Ipswich, (Emilio and Griscom) and on April 28, a single bird was seen at the same place by Griscom. This is probably another case of being driven northward by southern storms. May 13 to June 17. Not many reported.
- 608. Scarlet Tanager. May 12 to October 27, Moulton. Present in average numbers.
- 611. Purple Martin. May 12 and 25. Very rare migrant.
- 612. Cliff Swallow. May 12 to August 4. Uncommon summer resident.
- 613. Barn Swallow. April 23 to September 15. Common summer resident.
- 614. Tree Swallow. March 30 to October 27, Emilio. Common summer resident.
- 616. Bank Swallow. April 29 to September 1. Uncommon summer resident.

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617. Rough-winged Swallow. April 29 and May 18. See article on page 77.
619. Cedar Waxwing. Present to October 12. Exceedingly variable resident species.
621. Northern Shrike. January 22 and March 17; November 10. Very common during November and December of this year.
- 622e. Migrant Shrike. February 7 and April 6. Emilio and Griscom.
624. Red-eyed Vireo. May 12 to September 15. Average numbers.
627. Warbling Vireo. May 9 to June 27. Few reported.
628. Yellow-throated Vireo. May 11 to August 28. Few reported.
629. Blue-headed Vireo. April 27 to October 6. Not so many observed in the breeding season as formerly.
636. Black and White Warbler. April 28 to October 6. Average numbers.
637. Prothonotary Warbler. June 2. Seen on the Ipswich River by George E. Benson and Dr. Wyman Richardson.
639. Worm-eating Warbler. April 19 and 20. First seen on Eagle Hill Road, Ipswich by C. E. Clarke and next day by Emilio.
642. Golden-winged Warbler. May 5 to July 31. Locally common summer resident.
645. Nashville Warbler. May 4 to September 1. Locally common summer resident.
647. Tennessee Warbler. May 26, Morley. Only one definite record.
- 648a. Northern Parula Warbler. May 2 to May 26; September 10. Normal in the spring, scarce in the fall.
650. Cape May Warbler. May 12 and 18. Rare migrant.
652. Yellow Warbler. May 2 to August 7. Common summer resident.
654. Black-throated Blue Warbler. May 6 to 22; September 29 to October 6. Uncommon migrant.
655. Myrtle Warbler. May 25, June 30, August 25. The continued finding of Myrtles at Palmer's during the breeding

season and the fact that this year an old bird was seen feeding a young one is surely fastening the title of an all the year resident on this species.

- 657. Magnolia Warbler. May 11 to 27; September 21. Fair numbers during the spring but few seen in the fall.
- 659. Chestnut-sided Warbler. May 2 to September 1. Present in usual numbers.
- 660. Bay-breasted Warbler. May 19 and May 27. Rare migrant.
- 661. Black-poll Warbler. May 12 to June 2; September 19 to October 6. Common migrant especially during the fall.
- 662. Blackburnian Warbler. May 10 to June 27. Uncommon breeding species, generally in pine woods.
- 667. Black-throated Green Warbler. April 28 to October 16. Common breeding species.
- 671. Pine Warbler. March 31 to September 25. Locally common species.
- 672. Palm Warbler. September 25 to December 1. Uncommon migrant species that occasionally is with us very late in the year.
- 672a. Yellow Palm Warbler. April 7 to May 13; October 6 to December 1. Common migrant but variable in numbers.
- 673. Prairie Warbler. May 8 to August 25. Fairly common summer resident locally.
- 674. Ovenbird. May 1 to September 1. Common summer resident.
- 675. Water-Thrush. May 18 to 22; November 17. "Two Water-Thrushes were about my yard on November 17," Arthur Morley.
- 679. Mourning Warbler. July 20. About Arthur Morley's banding station.
- 681. Maryland Yellow-throat. May 5 to September 15. Present in usual numbers.
- 685. Wilson's Warbler. May 13 to 25. Few reported.
- 686. Canada Warbler. May 12 to August 17. Uncommon breeding species.
- 687. Redstart. May 6 to September 16. About usual numbers.
- 697. Pitpit. January 31, Nahant, Dr. May; September 15 to November 10.

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703. Mockingbird. March 17 and April 20 ; September 23 and 26. About the Crane Estate, Ipswich.
704. Catbird. Through January at Swampscott ; April 28 to October 6. Present in good numbers.
705. Brown Thrasher. April 27 to September 17. About average numbers.
718. Carolina Wren. About Fay's, January 27, February 20, late June, November, December 22. One was seen at Nahant by Emilio on October 5. A pair were seen at least once at Fay's but no nest or young birds were located.
721. House Wren. April 27 to September 12. Common about Fay's again this year.
722. Winter Wren. October 5. Only one reported.
724. Short-billed Marsh Wren. May 10 to October 16, Emilio. Locally common species.
725. Long-billed Marsh Wren. May 15 to September 15. Not so common as formerly.
726. Brown Creeper. Present and probably breeding on the Ipswich River Bird Trip, May 18 ; September 15. Fairly common during the colder months.
727. White-breasted Nuthatch. Uncommon breeding species, more common winter resident.
728. Red-breasted Nuthatch. April 6 ; July 16 ; September 8. The unusual July record was made by Townsend.
735. Chickadee. Common permanent resident.
748. Golden-crowned Kinglet. May 1 ; September 21. Unusually common during the late fall and early winter, this year.
749. Ruby-crowned Kinglet. March 24 to May 12 ; October 5 to December 14, Emilio. Usual numbers.
755. Wood Thrush. April 19, May 5 to———-. This unusual spring record is one of several which we have noted in this list as the probable results of early southern storms. About usual numbers during nesting season. The early record was made by Emilio.
756. Veery. May 8 to September 5. Locally a common species.

757. Gray-cheeked Thrush. May 22 and 25; September 15.
Rare migrant species.
- 758a. Olive-backed Thrush. May 15 and 25; September 15 and
October 20. Uncommon migrant.
- 759b. Hermit Thrush. April 9 to December 5. A generally
distributed if not numerous species, breeds in the Coun-
ty but is most numerous during migration.
761. Robin. Spring winter resident, very common breeding
species and seen in throngs during migration.
766. Bluebird. March 12 to November 4. Common breeding
species.





A WINDOW-PRINT

ALBERT P. MORSE

Last October, when Mr. Hall, constable at the Peabody Museum, made his rounds one day to draw the shades on the eastern windows of Weld Hall, he discovered on the one at the southeast corner of the second floor, a curious imprint.

This, apparently, was made by a bird of about the size of a pigeon flying against the window,—very probably in an attempt to escape from a hawk, which had been seen in the vicinity.

The presence of large plate-glass windows on the opposite sides of the hall, apparently offering free passage through, probably accounts for the frequent finding in the yard of dead or injured birds. These are usually birds of small size, visitors to the trees in the shaded side of the yard which have mistakenly attempted this route, misled by the clear light of the western sky. This is the first time that so large a bird has left unmistakable evidence of its action.

The imprint remained visible on the window for over a week, until washed off by the autumn rains.

(See frontispiece)

AN UNUSUAL FLIGHT OF BRANT

CHARLES W. TOWNSEND

Brant are irregular in their migratory visits to the Essex County coast, very few being seen in most years, while occasionally large numbers occur. On November 25, 1900, a flock of over a thousand alighted on Ipswich Beach.* On November 1, 1929, in an easterly storm, Mr. Daniel S. Wendel of Ipswich, a careful observer, walked along Ipswich Beach between the hours of 10 A. M. and noon, and during all this time flocks of Brant containing each from 50 to 75 birds flew southeast, passing him every three to five minutes, and closely following the outer edge of the surf. Coming from the north, they reached the surf-line off the beach about half a mile beyond the lighthouse. All continued on around the end of the beach at the Essex River, with the exception of a few small flocks and of two large flocks of about 250 each that crossed the dunes near the end, over the depression which at very high tide is flooded.

All the birds dropped into the water of the broad estuary at the meeting of the Essex and Castle Neck Rivers. More flocks joined them, and, until 4 P. M., when Mr. Wendel left, they were still coming but in fewer numbers. He shot three Brant from a small flock that flew over the dunes.

The birds formed a flock that stretched from the Essex side back of Coffin's Beach to Hog Island. They kept rising and flying to windward, only to drift back with the strong wind and settle again in the water. Those that got up first at one end of the line would often settle before the others at the other end rose. He estimated that this immense flock contained at least 10,000 birds. It was high water about noon, and, as the tide receded, many of the birds walked up on the flats and sand bars which they covered in black masses.

* Townsend, *Birds of Essex County*, p. 150.

A SHARP-SHINNED HAWK AND ITS KILL

GEORGE E. BENSON

On September 16, 1924, I was duck shooting on a salt marsh on Cape Cod. I was hidden in a patch of tall sedge grass on a point of marsh running down between two shallow, eel grass-filled channels, with my decoys set in the broader channel to leeward of the point. The morning was warm and sunny with a light breeze, and I was lazily watching a Sharp-shinned Hawk cruising low over the sedge in my direction. As he neared the opposite edge of the channel, perhaps seventy yards away, he darted sharply to the right and I saw a small bird rise from the grass just in time to escape his stoop. The small bird flew nearly straight up with the hawk in pursuit. On up they went until the small bird appeared no more than a dark speck, still visible because my eye had not left its course from the start. Then suddenly the speck began to drop, falling like a stone with no wings visible even as it drew nearer. The hawk also dropped, but with wings only partly closed, a few feet behind and to the left of its prey, and keeping the same relative position as it fell. Both birds were falling swiftly and straight, but, just before they reached the surface of the marsh, the hawk made a lightning-like turn, flashed toward the small bird, and struck and held it barely three feet above the grass. As he rose, the hawk swung over the channel below me and I shot him as he passed. In falling he dropped his prey which landed beside him on the water. It proved to be a young Least Flycatcher. The hawk was also a bird of the year.

A WINTER AFTERNOON AT FAY'S

ARTHUR P. STUBBS

It was early in the afternoon of December 12, the ground was covered with about six inches of fallen snow, the air was crisp although the sun shone brightly. I entered Fay Avenue and had taken but a few steps beyond the old gate house when I found a bunch of birds in and around a larch beside the way. The little company was made up of Starlings, White-throated

Sparrows and one lone Fox Sparrow. A few rods farther along the avenue there were Chickadees and off to the right I heard a Nuthatch. I followed this call and found it to come from a White-breast. Mounting a little rise I paralleled the Avenue by walking through the brush and soon noted a Northern Shrike in a tree-top. Working back to the Avenue I found a little concourse of Juncos and Tree Sparrows feeding about a weedy gravel pit. No birds were seen from here to the "Barnacle," the rough stone cottage at the far side of the Lawn. At the rear of the "Barnacle" is a feeding station of rough shelves and boxes, and after a little wait here, I was able to list Hairy and Downy Woodpeckers, Song Sparrows, a Brown Creeper, White and Red-breasted Nuthatches, Chickadees, a Golden-crowned Kinglet and a Carolina Wren. Turning back I skirted Farm Pond, now a frozen weedy swamp, where I found more Song Sparrows. Swinging back to the Avenue and proceeding homeward I flushed a cock Pheasant which sailed off into the wooded swamp. Elapsed time for the trip two hours.

ABOUT THE ROUGH-WINGED SWALLOW

S. G. EMILIO

April 29, 1930, I was canoeing with my two boys on the Ipswich River above Howe's Station, Middleton. We nosed into the creek down which flowed much of the sewage from the State Hospital, when the filter beds were not working,—a decidedly nasty place,—but at this time a great number of swallows were hawking low over the water and we wanted to watch them at close range.

There was a very strong westerly breeze blowing and the birds would work slowly to windward, then rise, wheel and dash down wind to the lee shore, to turn again and fly up wind. Barn, Tree and Bank Swallows were all readily identified and presently I saw an odd bird, larger and darker than a Bank Swallow, more sluggish but powerful, in flight, and with a sooty brown throat and upper breast. As the bird on several occasions passed so close it had to dodge to avoid my paddle, the opportunity to see it was

excellent and I knew it to be a Rough-winged Swallow, a species I had seen nesting at Fairfield, Conn. and several other time observed here in eastern Massachusetts.

Nearly three weeks later on May 18, the morning of the River Trip, as Dr. Townsend and I were strolling toward the South Middleton rendezvous along a road about a half a mile from where I saw the Rough-wing in April, a bird flew across the road and into a gravel pit, carrying in its bill a small stick. Our glimpse of the bird was rather brief but we both exclaimed "Why, that was a Rough-wing!" and after looking at each other in amazement, advanced cautiously to inspect that gravel pit. There was a hole in it about eight feet up, pretty large for a swallow it seemed, but there were two birds carrying sticks, presumably for nesting material, into that hole and they were Rough-winged Swallows.

Others of the party saw them at this time and still others, who joined us at South Middleton, left canoes on the trip downstream to see the birds and nest hole.

A week or so later, while driving by with Mr. Stubbs we decided to see how the nesting was coming on, but found that some miscreant had shoved a piece of wood split from a two inch plank into the hole, and no birds were in evidence.

I venture to call attention to a very interesting article, with a map, on the distribution of the Rough-wing in New England, in the January, 1930 issue of "Bird Banding," by Dr. John B. May. It certainly shows a tendency of this bird to extend its range to northeastern Massachusetts and the above-described attempted nesting certainly indicates that the bird is inclined to breed here if it can find a suitable location. Dr. May briefly mentions this particular instance.

JAEGERS AT PLAY?

RALPH LAWSON

During recent years I have on several occasions seen Jaegers apparently trying to catch small shore birds which have strayed out over the sea. I had assumed that this was a common practice of this family until recently told by Dr. Townsend that he had

never seen it. However, Dr. Townsend, in his account of the Parasitic Jaeger written for Bents' Life Histories of North American Birds quotes Anderson and Ekblaw who each observed this chase of shore birds in the Arctic.

I particularly remember one day in late August two years ago. I was sailing with friends in a small ketch off Gurnet Light near Duxbury, and saw at some distance three large birds performing acrobatic stunts within a limited area. As the group slowly worked in shore and towards us I recognized three Parasitic Jaegers and could see that they were chasing a small shore bird—probably a Ring-necked Plover. The small bird was hard pressed by his tormentors, but by quick twists and turns and by never resorting to direct flight he always managed to elude his pursuers and the last I saw of the group they were well in shore. I judged that the shore bird had a purpose in working towards the land, and hope he or she finally succeeded in escaping.

On this occasion and on other occasions when I have seen these manoeuvres it has appeared to me as though the Jaegers were bullying the small birds rather than trying to kill them. It may have been that the clever tactics of the small birds prevented the Jaegers from really attaining speed, but never did their attacks approximate the bold dash of a hungry hawk, and while I sometimes expected to see the shore bird knocked into the water during the next second, the whole performance reminded me more of a cat playing with a mouse than a serious attempt on the part of the Jaegers to secure a meal.

A FISH DINNER

ARTHUR P. STUBBS

On the afternoon of November 27, 1929, while seated in an automobile within the earth-works of the old fort at Naugus Head, Marblehead, S. G. Emilio and the writer had, what to us was, a new experience. Looking down the shallow waters of that part of Salem Harbor, hardly more than a hundred yards away, we saw two Double-crested Cormorants fishing.

Swimming slowly into the wind which was drawing out of the Harbor, they would suddenly dive, throwing their bodies almost clear of the water in doing so. Fishing seemed to be good for we saw each bird bring up a fish. The first fish noted was of fingerling size and was quickly disposed of as the bird sat at rest upon the water. Possibly this act was hurried somewhat by the fact that a foot or two above the Cormorant's head a Herring Gull was poising awing, very much interested in the Double-crest's plunder.

The other Cormorant had trouble with his catch, a fish apparently eight or nine inches long and having a large head. The bird tried repeatedly to swallow the fish head first but for some cause did not succeed. The fish was evidently dead as when in manoeuvring it the captor dropped it, it merely floated and made no movement. The bird kept picking the fish up and resumed the effort to swallow but had accomplished nothing when last seen. A question was aroused in our minds whether the fish might have been a half grown sculpin and its spreading horns have been the cause of the bird's difficulty.

CALENDAR OF THE ESSEX COUNTY
ORNITHOLOGICAL CLUB OF MASSACHUSETTS

1929

JANUARY 14. Regular meeting. Nine members present. Evening devoted to field notes and general discussion.

FEBRUARY 11. Regular meeting. Vice-President A. P. Morse in the chair. Fourteen members present. Communication from Mr. G. A. Loveland, Chief of the United States Weather Bureau Station at Boston. Subject: "Birds and Weather."

MARCH 11. Regular meeting. President F. W. Benson in the chair. Sixteen members present. Communication from Dr. John B. May, State Ornithologist. Subject: "An Unpublished Manuscript of the late Edward Howe Forbush, recording interesting experiences of his life."

MARCH 25. Regular meeting. Mr. A. P. Stubbs in the chair. Nine members present. Evening devoted to field notes.

APRIL 8. Regular meeting. Vice-President A. P. Morse in the chair. Eighteen members present. Communications from Dr. Francis Harper. Subject: "The Canadian River Region of Athabasca"—Illustrated.

APRIL 22. Regular meeting. Mr. W. B. Porter in the chair. Fourteen members present. Evening devoted to migration and field notes.

MAY 13. Regular meeting. Vice-President A. P. Morse in the chair. Twenty members present. Communication from Mr. S. G. Emilio. Subject: "North American Birds Recorded in Europe."

MAY 27. Regular meeting. Mr. W. B. Porter in the chair. Twelve members present. Ipswich River Bird Trip reviewed. Field notes.

JUNE 10. Regular meeting. Vice-President A. P. Morse in the chair. Twenty-three members present. Communication from Dr. C. W. Townsend. Subject: "A Recent Six Months Trip down the West Coast and up the East Coast of South America."

SEPTEMBER 9. Regular meeting. Seven members present. Evening devoted to a recounting of summer field notes.

OCTOBER 14. Regular meeting. Vice-President A. P. Morse in the chair. Ten members present. Communication from Mr. A. P. Stubbs. Subject: "A Preliminary Report on the Artichoke River Sanctuary."

NOVEMBER 11. Regular meeting. Vice-President A. P. Morse in the chair. Eighteen members present. Communication from Mr. Ludlow Griscom. Subject: "A Comparison of the Bird Life of Eastern Massachusetts with the Bird Life of the New York City Region."

DECEMBER 9. Regular meeting. Vice-President A. P. Morse in the chair. Twenty-four members present. This was the annual meeting of the Club. Officers and Council for 1930 elected. Communication from Dr. C. W. Townsend. Subject: "The Bird Life of South America as seen by a Traveler."

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